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THÈSE

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To my loving parents.

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« Les prises de contrôle, comme les défaillances, représentent une des méthodes naturelles d'élimination des bois morts dans le combat pour la survie. Une société plus ouverte et plus efficace peut en résulter » [Samuelson, 1970, p505]

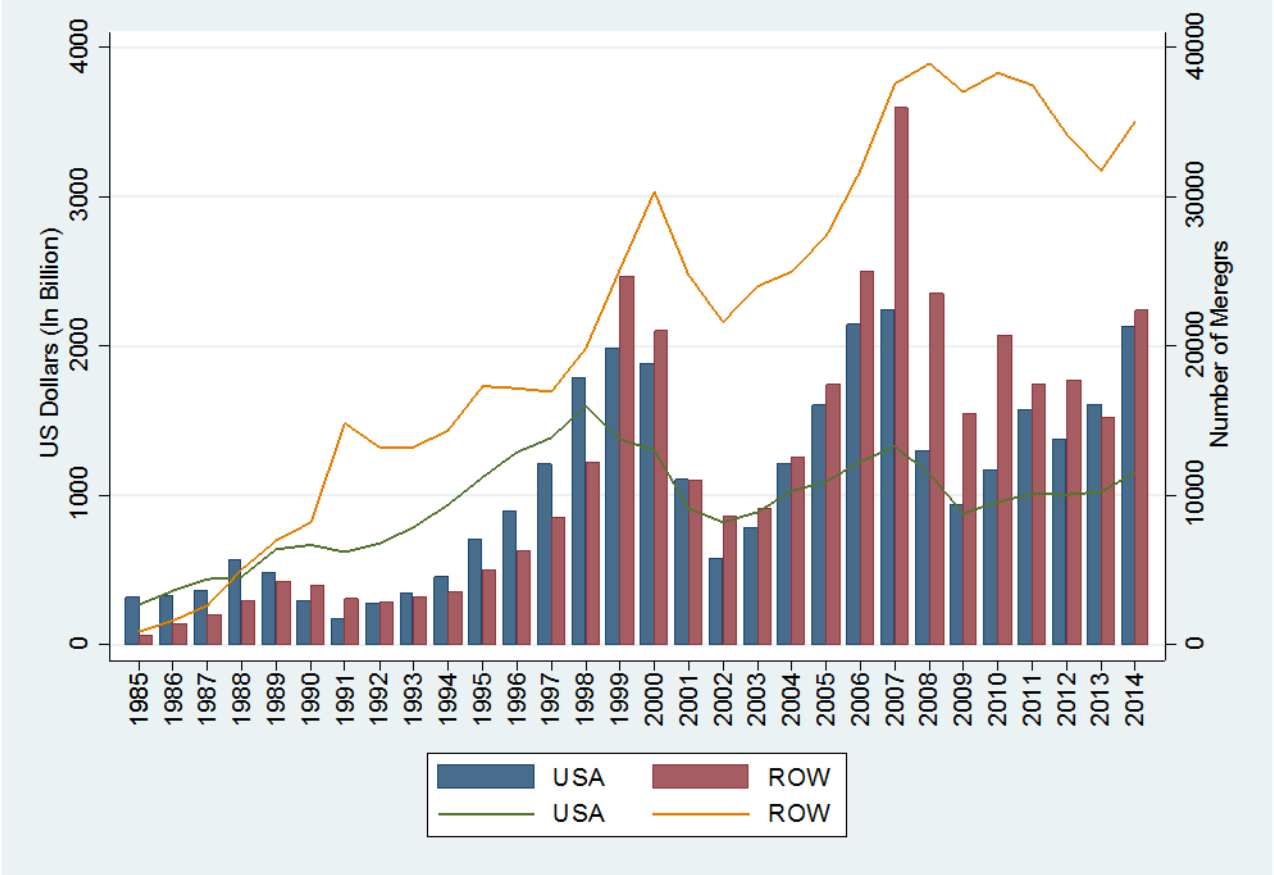
1. Introduction générale :

Les fusions et acquisitions[1] (Fusac) sont une des décisions économiques importantes que les dirigeants prennent dans la vie de leurs entreprises avec des implications majeures en matière de réallocation de ressources. Ces évènements procurent aux chercheurs l'opportunité d'examiner les impacts des décisions managériales et des comportements des compétiteurs sur les valeurs actionnariales. Ils fournissent un chemin pour observer de près l'ensemble complexe des mécanismes contractuels qui sont développés pour rendre possible ces transactions. Une abondante littérature a été développée pour comprendre les motifs des fusions et acquisitions et couvre un spectre large de sujets mais la plupart sont centrées sur le cas américain. Dans 4 revues académiques majeures[2], le nombre d'études publiées entre 2000 et 2012 sur les fusions et acquisitions s'élève à 185 dont 165 (89,2%) pour les seuls USA, 8 pour un seul pays non américain, 4 intéressant des pays européens et 8 couvrant plusieurs pays dans le monde[3]. Betton, Eckbo et Thorburn (2008) fournissent une revue très complète de cette littérature sur le marché du contrôle des entreprises.

Le volume des fusions et acquisitions réalisées dans le monde a augmenté significativement[4] durant les deux dernières décennies du fait de la globalisation accrue, d'initiatives économiques variées, de la libéralisation des activités financières, des échanges commerciaux, des avancées technologiques et de la dérégulation, parmi d'autres facteurs. La valeur moyenne annuelle des transactions s'est élevée à 2 257 milliards de dollars dans le monde entre 1985 et 2014, avec des pics en 1999 et 2007, respectivement de 4 454 milliards de dollars et 5 843 milliards. La valeur des transactions des Fusac en dollars pour le reste du monde (403 milliards) avait dépassé celles effectuées aux USA (302

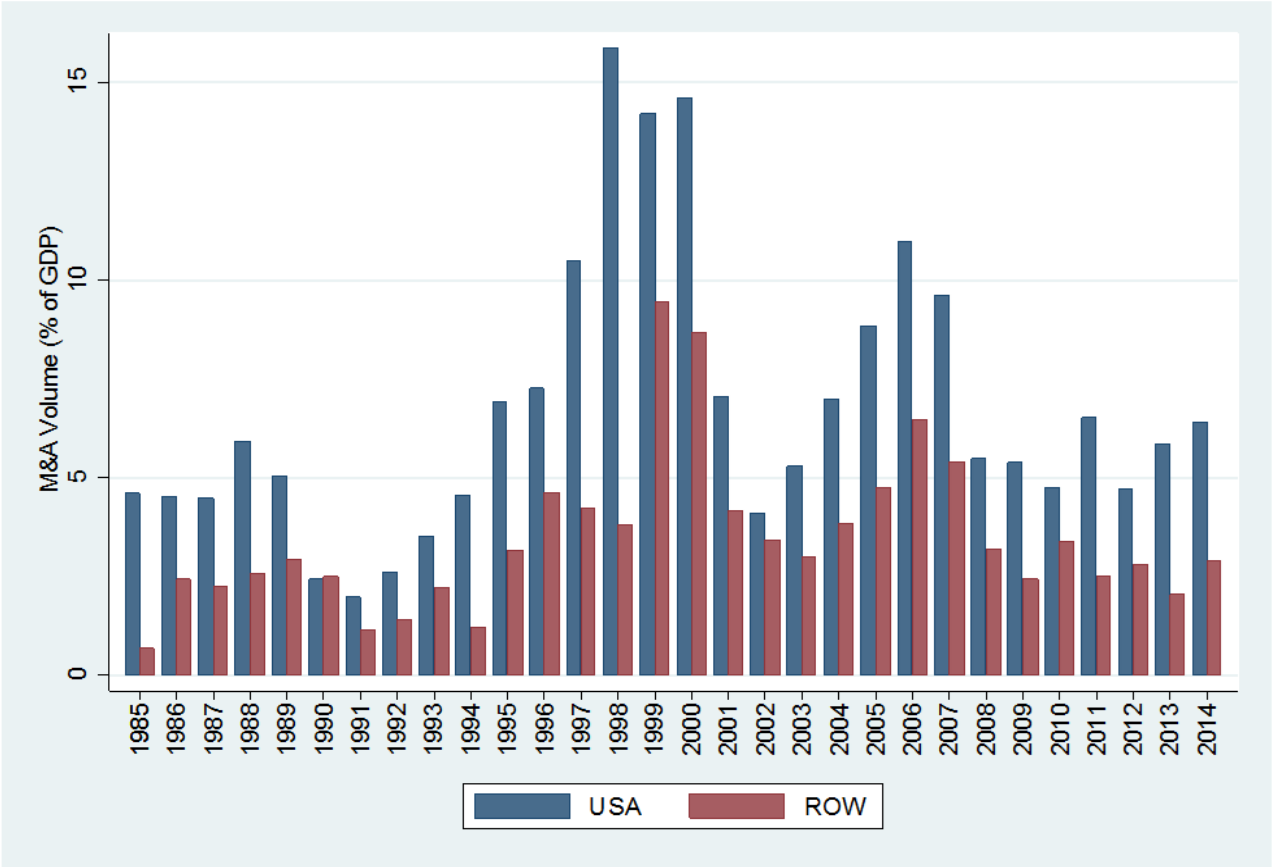
[1] Tout au long de cette thèse, j'utiliserai indifféremment les termes de fusions et acquisitions et prises de contrôle.
[2] Journal of Finance (JF), Review of Financial Studies (RFS), Journal of Financial Economics (JFE) et Journal of Financial and Quantitative Analysis (JFQA).
[3] Je remercie Helen Bollaert pour le partage de ses données.
[4] Par exemple, en 2014 uniquement une valeur de 4 400millairds de $ a été notée pour les Fusac, ce qui représente approximativement 5% du PNB mondial. *(Source: SDC Database and World Bank Indicators)*

milliards) en 1990. La domination des USA revint en 1993. Mais, les autres pays du monde reprirent l'avantage à la fin des années 90 et dominèrent ensuite le marché américain. Le pic le plus élevé de transactions pour les pays du reste du monde a été observé en 2007 pour une valeur de 3 596 milliards de dollars. En nombre d'opérations, ces pays ont aussi dépassé les USA dès 1988 et ont continué sur cette tendance. Entre 1985 et 2014, 70% des annonces de fusions et acquisitions n'impliquaient pas une firme américaine en qualité d'acquéreur.



Graphe : Le graphe montre la progression des annonces de fusions et acquisitions aux USA et dans le reste du monde (ROW) entre 1985 et 2014. (Source : SDC Database)

Le volume moyen des Fusac représentaient pour les pays du reste du monde 3,5% de leurs PNB entre 1985 et 2014 contre 6,5% aux USA. Ce pourcentage est passé de 0,68% en 1985 à 9,45% en 1999. Durant les deux dernières décennies, l'activité des Fusac a représenté une part importante des activités de marché pour ces pays. En dépit de fortes différences dans l'activité mondiale des Fusac, il apparaît quelques évidences sur la taille et la dynamique des transactions au plan international.



Graphe : Ce graphe montre l'évolution agrégée des fusions et acquisitions réalisées aux USA et dans le reste du monde (ROW) entre 1985 et 2014. Les valeurs des transactions sont normées par le PNB agrégé pour le reste du monde et par le PNB US pour les USA. (Source : SDC Database et indicateurs de la Banque Mondiale)

Les fusions et acquisitions permettent aux entreprises de tirer avantage d'économies d'échelles, de gagner des parts de marché et d'accéder à des ressources rares dans des environnements institutionnels spécifiques tout en évitant les coûts élevés de création ex nihilo (Finkelstein et Cooper : 2012). Pratiquement, les fusions et acquisitions internationales obéissent aux mêmes motivations que les opérations nationales. Cependant, l'analyse de l'activité internationale en matière de Fusac, permet d'étudier d'autres facteurs variés qui viennent ajouter, au-delà des motivations économiques habituelles, de nouvelles frictions en lien avec la gouvernance (Rossi et Volpin : 2004), l'environnement légal et institutionnel (Bris et Cabolis : 2008), la qualité des publications comptables, le commerce bilatéral, la géographie et les différence de valorisation (Rel, Liao et Weisbach : 2012), les biais comportementaux (Ferris, Jayaraman et Sabherwal, 2013) et les valeurs culturelles (Ahern,

Daminelli et Fracassi : 2015), parmi d'autres. L'activité des opérations de fusion et acquisition est affectée au plan international à la fois par les caractéristiques des pays de l'acquéreur et de la cible.

Cette thèse a pour objectif d'approfondir notre connaissance des effets des institutions sur l'activité mondiale en matière de fusions et acquisitions. North (1990, p.4) écrit « les institutions comprennent toute forme de contraintes que les êtres humains conçoivent pour donner forme à leurs interactions ». Elles peuvent être formelles ou informelles. Li et Zahra (2012) définissent les institutions formelles comme « un ensemble de règles contractuelles politiques et économiques qui régulent les comportements individuels ». North (1990) définit les institutions informelles comme des coutumes, des traditions et des normes religieuses fondant une société. Beaucoup d'académiques s'accordent aujourd'hui sur l'importance des institutions. Les institutions formelles et informelles sont considérées comme des composants importants de l'environnement contractuel (North : 1990 ; Scott : 2001). Les différences entre pays à la fois pour les contraintes formelles et informelles doivent être prises sérieusement en considération pour expliquer la diversité des prises de décision en matière économique. Je me concentrerai sur les effets des institutions régulant le marché du travail comme contrainte formelle et sur les effets des cultures nationales en tant que contrainte informelle, les deux pesant sur le comportement des firmes, en particulier dans le contexte des Fusac.

2. Revue de la littérature :

Cette section balaie la littérature existante et les principaux résultats sont résumés en annexe.

2.1. Les institutions formelles et les fusions et acquisitions

Il y a une littérature croissante mettant en lumière l'importance des institutions formelles dans l'explication de l'activité des Fusac dans le monde. Peu d'études ont exploré les effets des différences entre pays de la gouvernance d'entreprise (institution formelle) sur l'activité des Fusac. Utilisant un échantillon de 45 686 fusions et acquisitions annoncées par des firmes cotées durant les années 90 et réalisées à la fin de l'année 2002 dans 49 pays, Rossi et Volpin (2004) montrent que les différences entre législations et régulations nationales expliquent l'activité en matière de fusions et acquisitions.

Ils montrent que le volume de l'activité Fusac est plus grand dans les pays aux meilleurs standards comptables et dotés de protections plus fortes des actionnaires. Ils mettent en évidence ensuite une

relation négative entre la fréquence de cessions en cash et le niveau de protection des actionnaires dans le pays de l'acquéreur. Dans les fusions transfrontalières, les cibles proviennent de pays aux protections plus faibles des investisseurs, ce qui suggère que ces transactions transfrontalières jouent un rôle en matière de gouvernance en élevant les exigences de gouvernance d'entreprise pour les firmes cibles.

Les pratiques de gouvernance d'entreprise varient selon les pays. Bris, Brisley et Cabolis (2008) soutiennent que les Fusac internationales permettent aux firmes de changer le niveau de protection des investisseurs et étudient la relation entre les changements dans la qualité de la gouvernance d'entreprise et la performance des firmes au niveau sectoriel. Utilisant un échantillon de 7 330 fusions transfrontalières dans 41 pays durant la période 1990-2001, ils montrent que le Q de Tobin à l'intérieur du secteur augmente quand les firmes sont acquises par des firmes étrangères installées dans des pays dotés de meilleures protections des investisseurs et de meilleurs standards comptables. Ils font valoir que les firmes cibles peuvent adopter une protection accrue des investisseurs après la prise de contrôle et que le marché valorise cette protection supérieure. Martynova et Renneboog (2008) utilisent un échantillon de 2 419 transactions de Fusac dans 29 pays européens réalisées entre 1993 et 2001 et qui comprennent 737 fusions transfrontalières. Ils montrent que les différences de gouvernance d'entreprise – mesurées par des indices de protection des actionnaires, des minoritaires et des créanciers – entre pays de l'acquéreur et de la cible affectent les rendements constatés lors des fusions. Bris et Cabolis (2008) soutiennent que suivant la législation internationale, les firmes cibles acquièrent le statut de national du pays de l'acquéreur dans le cadre d'une acquisition transfrontalière à hauteur de 100% de leur capital, ce qui les oblige à adopter le système de gouvernance d'entreprise du pays de l'acquéreur. Se fondant sur cet argument, ils étudient les effets de changement de protection des investisseurs à la suite d'acquisitions transfrontalières dans un échantillon de 506 acquisitions transfrontalières couvrant 39 pays entre 1989 et 2002 et montrent qu'une meilleure protection des actionnaires et de meilleurs standards comptables dans le pays de l'acquéreur conduisent à des primes d'acquisition plus élevées pour les acquisitions transfrontalières relativement à ce qui est observé pour les opérations purement domestiques. Dans la même veine, Stark et Wei (2013) étudient les effets de variation entre systèmes de gouvernance d'entreprise pour 371 acquisitions étrangères de cibles américaines entre 1980 et 1998. Ils trouvent que la prime de fusion est négativement associée à la qualité de la gouvernance d'entreprise des pays acquéreurs pour les

transactions réalisées en actions, ce qui suggère que les acquéreurs étrangers compensent les actionnaires des firmes cibles US pour leur exposition à des systèmes de gouvernance plus faibles. Ils montrent de plus que les rendements anormaux cumulés des acquéreurs autour des dates d'annonce augmentent avec la qualité du système de gouvernance dans les offres en actions et que les acquéreurs étrangers aux meilleurs systèmes de gouvernance ont plus tendance à faire des offres en actions.

Buch et DeLong (2004) examinent les facteurs qui expliquent les fusions internationales de banques en utilisant un échantillon de 3000 Fusac de banques entre 1985 et 2001. Ils montrent que le coût d'information réduit le volume des fusions transfrontalières de banques et que les différences de régulation affectent également les fusions transfrontalières et l'activité d'acquisition. Focarellia et Pozzolob (2008) s'interrogent sur les facteurs explicatifs des variations dans les stratégies d'internationalisation suivies par les firmes, à partir d'un échantillon de 403 Fusac transfrontalières intéressant des sociétés de service financier entre 1990 et 2003 (banques et compagnies d'assurance). Ils montrent que la stratégie d'internationalisation des firmes suit globalement le même schéma et trouvent que la distance géographique, les facteurs économiques et culturels jouent un rôle clé dans l'expansion des sociétés financières à l'étranger.

Ferreira, Massa et Matos (2010) examinent le rôle des investisseurs institutionnels dans les Fusac étrangères. Ils utilisent un échantillon de 3 631 fusions et acquisitions réalisées entre 2000 et 2005 dans 26 pays et comprenant 786 opérations transfrontalières. Ils mettent empiriquement en évidence le fait que la présence de propriétaires institutionnels étrangers est positivement et significativement associée à l'activité en matière de fusions et acquisitions transfrontalières dans le monde. Elaborant à partir de l'hypothèse que les investisseurs institutionnels étrangers jouent un rôle de facilitateur sur le marché international du contrôle des entreprises et qu'ils aident à réduire les coûts de transaction et l'asymétrie d'information entre acquéreur et cible, ils montrent que la propriété institutionnelle étrangère augmente les chances qu'une transaction de Fusac soit transfrontalière, heureuse et réussie. Ils ont aussi trouvé que la relation positive entre la propriété institutionnelle étrangère et les résultats d'une fusion est plus forte dans les pays où les institutions légales sont plus faibles et les marchés financiers moins développés. Bris, Cabolis et Janowski (2010) utilisent un échantillon de 62 119 transactions de Fusac dans 41 pays entre 1990 et 2001. Lel et Miller (2015) utilisent quant à eux un échantillon de 41 792 transactions de Fusac dans 34 pays entre 1992 et 2003. Ces deux études

montrent que les pays ayant adopté des lois réglementant les prises de contrôle et anti-trust connaissent une augmentation dans l'activité agrégée de fusion et acquisition.

La littérature existante s'intéressant aux motifs des fusions transfrontalières se centre essentiellement sur les opérations impliquant des firmes américaines et se limite aux sociétés cotées. Ere, Liao et Weisbach (2012) établissent qu'un tiers des fusions dans le monde sont transfrontalières et que la part de ces dernières a progressivement augmenté passant de 28% en 1998 à 45% en 2007. Dans leur analyse, ils incluent également des firmes non cotées et recherchent les facteurs qui ont pu affecter les fusions transfrontalières sans jouer un rôle de même intensité dans les fusions domestiques. Ils utilisent un échantillon de 56 978 Fusac transfrontalières entre 1990 et 2007 dans 48 pays dans le monde. Les auteurs découvrent des faits intéressants, comme quoi 96% des transactions de Fusac concernent des cibles non cotées, 26% ont un acquéreur non coté et pour 97% des opérations, soit l'acquéreur, soit la cible sont non cotés. De plus, ils montrent que 80% des transactions impliquent une cible non américaine et 75% un acquéreur provenant du reste du monde. Ils trouvent qu'en addition aux facteurs explicatifs de l'apparition de fusions dans le cadre domestique, d'autres facteurs comme la proximité géographique, la qualité de l'environnement comptable et le commerce bilatéral augmentent la probabilité d'occurrence d'une Fusac transfrontalière. Les firmes des pays où on observe une augmentation de la valeur boursière des actions, une appréciation de la devise et un accroissement relatif du ratio Market-to-Book sont des acquéreurs plus fréquents. En revanche, les firmes de pays à faibles performances sont plus souvent des cibles.

Lin, Officer et Shen (2014) utilisent un échantillon de 12 030 transactions de Fusac réalisées dans 62 pays entre 1996 et 2012. Ils montrent que la combinaison appréciation de la devise et conflit d'agence joue un rôle crucial dans la création de valeur pour les actionnaires de l'acquéreur. Ils fournissent la preuve que les acquéreurs des pays dont la devise s'est fortement appréciée bénéficient de rendements anormaux cumulés (CAR) positifs et significativement élevés autour de la date d'annonce de l'opération et après la fusion. Ils trouvent que l'association positive entre l'appréciation et les CAR est plus forte dans les pays à forte protection des actionnaires et pour les firmes à meilleure gouvernance. Ils montrent enfin que les acquéreurs dans les pays à faible protection des actionnaires ont tendance à payer un prix excessivement élevé pour des cibles étrangères, particulièrement dans les périodes qui suivent une forte appréciation de leur devise.

Brockman, Rui et Zou (2013) étudient comment les connections politiques qu'entretiennent les firmes expliquent les performances des fusions et acquisitions. Recourant à un échantillon de 509 transactions de Fusac entre 1993 et 2004 réalisées par des acquéreurs liés politiquement et en le comparant à un échantillon d'entreprises semblables mais connectées politiquement, ils trouvent que les connections politiques de l'acquéreur jouent un rôle statistiquement et économiquement significatif dans la performance post fusion des acteurs. De plus, la nature de ce type de relation dépend étroitement du cadre institutionnel. Ils montrent que les acquéreurs politiquement connectés sous-performent les firmes non connectées dans les pays à fort système légal et à faible niveau de corruption. D'un autre côté, les firmes connectées surpassent en performance celles non connectées dans les pays à faible système légal et à haut niveau de corruption.

Serdar, Dinc et Erl(2013) utilisent des données collectées à la main de 41 transactions de Fusac annoncées et réalisés entre 1997 et 2006 pour étudier les réactions des gouvernements à des tentatives de prise de contrôle de grandes entreprises au sein de l'Union Européenne. Ils montrent que le nationalisme économique est un phénomène répandu dans lequel les gouvernements ont une préférence pour les fusions domestiques sur les fusions transfrontalières. Ces préférences sont plus marquées à certaines époques et dans les pays où les partis d'extrême-droite sont les plus forts et les gouvernements les plus faibles. Dans une étude récente, Karolyi et Taboada (2015) exploitent les différences de réglementation entre pays et montrent, dans un échantillon de 7 296 acquisitions de banques dans 78 pays entre 195 et 2012, que les acquéreurs ont tendance à provenir des pays à exigences fortes en matière de capital, de restrictions élevées pour les activités bancaires et à fortes supervisions. Enfin, ils montrent que les rendements anormaux cumulés des firmes cibles sont plus élevés quand l'acquéreur vient de pays à fortes exigences en capital, meilleur monitoring privé et fortes restrictions sur les activités bancaires.

2.2 Les institutions du marché du travail et les fusions acquisitions

Les réductions de coût – obtenues sur les salaires et les conditions de travail – pour obtenir des économies d'échelle sont souvent considérées comme le principal motif des Fusac (Devos, Kadapakkam et Krishnamurthy : 2009) qui peut être atteint à travers une restructuration du personnel après la fusion. En conséquence, les Fusac peuvent être la source de conflits d'intérêt entre les salariés et les actionnaires. Le pouvoir de négociation des employés détermine l'intensité de leur influence

sur les tentatives de prise de contrôle. Aussi, les considérations portant sur le rôle du monde du travail sont-elles importantes en matière de Fusac. Les études centrées sur les USA procurent des éléments de preuve sur les effets des institutions propres au marché du travail – réglementations pour la protection des employés et syndicalisation – sur les prises de contrôle d'entreprise. Becker (1995) analyse 300 grandes Fusac américaines réalisées par des entreprises cotées durant les années 80 et montre que les firmes cibles au taux de syndicalisation élevé obtiennent des premiums plus grands que les cibles à faible taux de syndicalisation. Ces gains plus élevés au profit des actionnaires reflèteraient la réappropriation des rentes que retiraient les employés. Dans la même veine, Li (2012) exploite des données par établissement du US Census Bureau et analyse les conséquences en matière de salaire et d'emploi des acquisitions de 4 000 firmes cotées entre 1981 et 2002. Il trouve que les firmes cibles à syndicats forts montrent plus de diminution des salaires et de l'emploi après une prise de contrôle que ce qui est observé au même moment dans des firmes comparables. Ceci indique que les employés des firmes cibles sont négativement affectés par la prise de contrôle et que les syndicats ne les protègent pas de ces effets négatifs. Au contraire, Tian et Wang (2014) utilisent des variations « localement » exogènes générées par des élections syndicales dont les résultats se sont joués avec des marges de votes très faibles. Ils étudient les effets de la syndicalisation sur l'exposition à la prise de contrôle et les gains tirés de la fusion dans un échantillon de 8 092 Fusac entre 1978 et 2009. Ils montrent que les entreprises à peine syndicalisées reçoivent moins d'offres de prise de contrôle, connaissent des rendements plus faibles à l'annonce des opérations et obtiennent des premiums plus bas. John, Anzhela et Diana (2015) utilise des variations par état dans les législations du travail et trouvent que les acquéreurs à l'environnement juridique exigeant connaissent des rendements lors des annonces plus faibles. Leur échantillon comprend 13 838 Fusac entre 1985 et 2009. Ils attribuent cet effet au fait que les acquéreurs poursuivant ces Fusac n'agissent pas au mieux des intérêts de leurs actionnaires. L'explication est cohérente avec la présence d'un conflit d'agence entre actionnaires et employés limitant les gains des actionnaires et les synergies tirées de l'acquisition.

La littérature existante fournit quelques évidences empiriques sur les effets des différences entre pays des protections en matière d'emploi sur l'activité des Fusac mais ces études sont essentiellement focalisées sur les législations protectrices de l'emploi. Par exemple, Alimov (2015) utilise un échantillon de 53 583 transactions transfrontalières de Fusac dans 28 pays entre 1991 et 2009 et met en évidence que les législations les plus protectrices de l'emploi sont associées au niveau le plus élevé

d'activité de prises de contrôle transfrontalières, surtout quand l'acquéreur vient d'un pays à protection de l'emploi plus faible. L'environnement institutionnel du pays favorise l'existence d'un type particulier de firme. Les acquéreurs recherchent soigneusement les firmes cibles du « bon » pays hôte. Levin, Lin et Shen (2015) s'intéressent à l'impact des lois protectrices de l'emploi sur la rentabilité des entreprises et sur les CAR autour des dates d'annonce pour 11 425 Fusac transfrontalières réalisées entre 1991 et 2012 dans 50 pays. Ils trouvent que les acquéreurs connaissent des CAR plus faibles autour des dates d'annonce et des profits moindres quand les cibles sont localisées dans des pays à haute protection du travail. Les résultats sont plus prononcés dans des secteurs intensifs en main d'œuvre et à forte volatilité du travail. Enfin, ils montrent que les acquéreurs réalisent des Fusac moins nombreuses et plus petites avec des firmes cibles situées dans des pays à forte protection de l'emploi. Dessaint, Gobulov et Volpin (2015) exploitent les réformes des protections de l'emploi dans 21 pays de l'OCDE entre 1985 et 2007. Ils montrent dans un échantillon de 45 696 Fusac que des réglementations plus protectrices réduisent l'activité en Fusac, les gains combinés pour les deux parties et les premiums. De plus, ils trouvent que la protection de l'emploi empêche les licenciements après la prise de contrôle alors que la réorganisation potentielle du personnel est une source significative de synergies.

Les institutions du marché du travail (contrainte formelle) sont des institutions gouvernant la flexibilité/sécurité de l'emploi et des salaires. Elles sont principalement gouvernées par deux composantes, (1) les lois protégeant l'emploi et (2) la négociation collective. Bien que des législations fortement protectrices donne aux personnels *de jure* plus de pouvoir de négociation, elles nous disent peu sur le pouvoir de négociation *effectif* des employés dans un pays donné. C'est-à-dire, comment un conflit particulier est résolu en pratique, étant donné l'état du marché du travail et la force des syndicats. En fait, il se peut que certains pays mettent en œuvre des législations protectrices simplement pour essayer d'atteindre un niveau actuel de protection modéré. Kanbur et Ronconi (2016) mettent en évidence une corrélation négative entre la force des législations du travail et l'intensité de leur mise en œuvre. Les deux types d'institutions peuvent ne pas avoir d'effets identiques. Comme il a été souligné plus tôt, le principal centre d'intérêt de la littérature existante réside dans le rôle des lois de protection du travail pour expliquer les différences entre pays des activités de prises de contrôle. Une question se pose naturellement : quel est l'effet (s'il existe) de l'ensemble des protections actuelles de l'emploi sur les activités de prises de contrôle ? Le premier

chapitre de cette thèse aborde principalement la protection de l'emploi à travers la négociation collective comme institution informelle et ses effets sur l'activité en Fusac dans le monde.

2.3 Institutions informelles et finance

Il est reconnu dans la littérature financière que la culture comme institution informelle affecte les comportements des individus (voir par exemple : Stulz et Williamson (2003), Licht, Godschmidt et Swartz (2005) et Guiso, Sapienza et Zingales (208, 2009)) et que les biais comportementaux affectent les actions et les résultats économiques (voir par exemple, Roll (1986), Cartwright et Cooper (1995), Malmendier et Tate (2008), Chui, Titman et Wei (2010), Siegel, Licht et Schwartz (2011), Ferris, Jayaraman et Sabherwal (2013), Aktas, de Bodt, Bollaert et Roll. (2016)). La culture affecte la façon dont les gens traitent l'information et transcrivent les situations, et en conséquence a un effet sur les modes de prise de décision. Néanmoins, les valeurs culturelles des pays influencent le comportement collectif des individus ou des groupes, en dépit du fait que ces individus se comportent différemment. Je me suis concentré sur les valeurs culturelles nationales et étudié les effets des différences entre pays des valeurs culturelles sur divers résultats des fusions et acquisitions. Hofstede (2001, p. 385) écrit « la fonction financière a été le dernier bastion de la gestion d'entreprise à échapper à l'analyse interculturelle ». Etudier les effets de la culture en finance n'a commencé en effet que tardivement au début des années 2000.

Une des études pionnières dans la littérature financière est celle de Grinblatt et Kelohariu (2001). Utilisant un ensemble unique de données sur la propriété et les échanges de titres pour 93 sociétés cotées finlandaises, provenant du Finnish Central Securities Depositary (FCSD) et couvrant une période d'environ 2 ans entre le 27 décembre 1994 et le 10 janvier 1997, ils montrent qu'il y a une forte probabilité que les investisseurs détiennent, achètent et vendent les actions de sociétés finlandaises qui leur sont très familières. Ils attribuent la familiarité à la distance géographique (faible distance des investisseurs), la culture (PDG partageant le même milieu culturel) et à la langue (parlant leur langue maternelle). Ces trois attributs de familiarité expliquent les préférences des investisseurs pour certains titres. Stulz et Williamson (2003) se sont intéressés à la religion dominante, définie comme la religion principale du plus grand nombre de personnes d'un comté, et expliquent son effet sur le niveau de protection légale des actionnaires et des créanciers dans les différents pays. Ils trouvent que les pays catholiques protègent les droits des créanciers moins efficacement que les pays

protestants. Enfin, ils font valoir que les variables proxy de la culture aident à mieux comprendre comment les droits des investisseurs s'imposent dans le monde. Guiso, Sapienza et Zingales (2008) utilisent la confiance comme variable proxy de la culture et étudient ses effets sur la participation au marché boursier (plus la confiance est élevée, plus la participation est grande). Ils montrent que les individus les moins confiants achètent le moins d'actions. Ces études mettent en valeur l'importance de la culture dans les décisions économiques mais ne recourent pas aux attributs culturels développés dans le cadre des études interculturelles[5].

Chui, Titman et Wei (2010) fournissent la première étude dans le courant de littérature se référant aux dimensions culturelles de l'individualisme de Hofstede (2001). Les auteurs relient l'individualisme à l'excès de confiance et au biais d'auto-attribution en utilisant les rendements boursiers et les volumes de transactions dans 55 pays entre 1980 et 2003. Leur étude montre que les dimensions culturelles de l'individualisme sont positivement associées au volume de transactions et à la volatilité aussi bien qu'à l'amplitude du momentum des profits. Utilisant les données de détention de fonds mutuels dans 26 pays entre 1999 et 2002, Beugelsdijk et Frijns (2010) soutiennent que la culture explique les biais domestiques dans l'allocation internationale d'actifs. Ils utilisent la répugnance à l'incertitude et les dimensions culturelles de l'individualisme et trouvent que les pays où la répugnance à l'incertitude est forte investissent moins de fonds sur les marchés étrangers et que les pays les plus individualistes sont les plus agressifs dans leurs allocations à l'étranger. Enfin, ils montrent que la distance culturelle entre deux pays affecte également les montants alloués sur les marchés. Dans la même lignée de recherche, Anderson, Fedenia, Hirschey and Skiba (2011) étudient les déterminants de la diversification internationale, plus particulièrement à travers la gestion institutionnelle de portefeuilles, dans 60 pays en 2006 et mettent en évidence que les fonds d'investissement de pays à forte répugnance pour l'incertitude font preuve d'un biais domestique plus fort et diversifient moins leurs positions à l'étranger. Les fonds d'investissement de pays à plus forte masculinité et à orientation à long terme dans leur culture présentent un biais domestique plus faible et les fonds de pays mettant en valeur la masculinité diversifient plus à l'étranger. Enfin, ils soutiennent que la taille de l'effet est économiquement significative et affirment que la culture a sur

[5] Hofstede (1980, 2001), Schwartz (1992, 1994, 1999), House, Hanges, Javidan, Dorfman et Gupta (2004), The World Value Survey (WVS, http://www.worldvaluessurvey.org).

les comportements des investisseurs un effet direct plus fort que les effets indirects (par exemple, à travers le cadre juridique et réglementaire). Siegel, Licht et Schwartz (2011) étudient les effets des cultures égalitaristes sur les flux internationaux d'investissement dans 50 pays entre 1995 et 2008. Ils mettent en évidence le fait que la distance de Schwartz (1994, 1999, 2004) entre pays sur la dimension égalitariste de la culture influence fortement et négativement les flux entre pays d'émissions d'obligations et d'actions, de prêts syndiqués et de transactions en Fusac.

Zheng, El Ghoul, Guedhami et Kwok (2012) étudient les effets de la culture sur la maturité de la dette d'entreprise. Ils défendent l'argument selon lequel la culture est une institution informelle ayant des effets forts sur les incitations et les choix des êtres humains en matière d'échange économique. Ils utilisent quatre dimensions de la culture (répugnance à l'incertitude, collectivisme, distance au pouvoir et masculinité) et, à partir d'un large échantillon de 114 723 firmes-années couvrant 40 pays entre 1991 et 2006, fournissent de fortes évidences empiriques selon lesquelles les pays qui se distinguent selon ces quatre dimensions utilisent plus souvent les dettes à court terme, après avoir contrôlé les effets de contraintes formelles comme les institutions juridiques, politiques, financières et économiques. Aggarwal, Kearney et Lucey (2012) utilisent la grande base de données du FMI sur les portefeuilles de dettes étrangères et d'actions, portant sur 174 pays d'origine et 50 nations destinataires entre 2001 et 2007. Ils examinent le rôle joué par la culture dans les investissements dans des portefeuilles étrangers. Ils trouvent que les traits culturels (individualisme, masculinité, distance au pouvoir et répugnance à l'incertitude) des nations d'origine et de destination interagissent avec la distance géographique et les points de gravité pour forger les styles d'investissement en portefeuilles étrangers à travers le monde.

Li, Griffin, Yue et Zhao (2013) soutiennent que la culture affecte la prise de risque par les entreprises à travers son influence directe sur les prises de décision par les dirigeants. Pour étudier les effets de la culture sur la prise de risque par les entreprises, ils utilisent des données collectées au niveau des firmes sur 35 pays entre 1997 et 2006. Ils recourent à une modélisation linéaire hiérarchique pour séparer les effets liés aux firmes et ceux liés aux pays. Ils trouvent que l'individualisme est positivement associé à la prise de risque en entreprise alors que la répugnance à l'incertitude et la préférence pour l'harmonie sont négativement associées à la prise de risque. Enfin, ils montrent que de plus grandes latitudes en matière de détermination de résultats renforcent la relation et qu'une

grande taille des entreprises l'affaiblit. Lievenbrück et Schmid (2014) se sont penchés sur les effets de la culture sur les décisions de couverture prises par les firmes. Ils ont utilisé des données collectées à la main sur des entreprises du secteur de l'énergie dans 50 pays dans le monde entre 2000 et 2009. Ils trouvent que les pays à orientation sur le long terme recourent moins à la couverture et ont des volumes de transaction sur les outils de couverture plus faibles. De plus, ils observent des volumes moindres de couverture avec des options dans les pays qui ont une culture fortement marquée de masculinité. Ils concluent que la culture a de forts effets sur les décisions de couverture prises par les firmes et que la taille de cet impact est suffisamment large d'un point de vue économique pour qu'il ne puisse pas être expliqué par des différences économiques et institutionnelles entre pays.

Holderness (2014) étudie le rôle de la culture en connexion avec la structure de propriété pour 8 076 firmes cotées dans 32 pays. Utilisant la dimension égalitarisme de la culture, il trouve que la propriété est plus concentrée dans les sociétés qui manifestent une forte préférence pour une égalité de traitement plutôt que pour un traitement hiérarchique des individus. Kwok et Tadesse (2006) montrent que la culture explique la variation dans les systèmes financiers parmi 41 pays. Ils trouvent que les pays où la dimension répugnance à l'incertitude est forte dans leurs cultures ont plutôt des systèmes financiers fondés sur les banques. Cline et Williamson (2015) étudient comment la culture influence les choix de réglementation en matière de négociation de leurs propres titres par les entreprises. Utilisant la dimension confiance dans la culture à partir de l'enquête World Value Survey (WVS), ils trouvent que la confiance dans les étrangers est négativement et significativement associée aux réglementations sur les transactions sur titres propres, en recourant au sein de 71 pays à l'indice anti self-dealing de Djankov, La Porta, Lopez-de-Silanes, et Shleifer (2008). Griffin, Guedhami, Kwok, Li et Shao (2014) s'intéressent aux effets de la culture sur les pratiques de gouvernance d'entreprise. Utilisant des données de firmes embrassant les différentes dimensions de la gouvernance d'entreprise pour 38 pays entre 2006 et 2011 et appliquant une technique de modélisation hiérarchique linéaire, ils trouvent que les firmes situées dans des pays mettant l'accent sur l'individualisme et décourageant la répugnance à l'incertitude dans leur culture sont positivement et significativement reliées au niveau de leurs pratiques en matière de gouvernance.

Eun, Wang et Xiao (2015) mettent en évidence les effets de la culture sur la synchronicité des cours boursiers. Utilisant les données de 47 pays entre 1990 et 2010, ils trouvent que les cours boursiers

tendent à évoluer de manière synchrone dans les pays à culture affirmée et à caractère collectiviste et à moins évoluer ensemble dans les pays à culture moins homogène et plus individualiste. Le niveau d'ouverture du commerce et de la finance des pays affaiblit cette relation. Chen, Dou, Rhee, Truong et Veeraraghavan (2015) s'interrogent sur la question de savoir si les différences de valeurs culturelles des pays expliquent les écarts dans la détention de trésorerie par les entreprises, aussi bien aux USA que dans le reste du monde. Dans une analyse entre pays, ils utilisent un échantillon de 27 801 firmes dans 41 pays entre 1989 et 2009 et trouvent que les pays à forte répugnance pour l'incertitude tendent à détenir plus de trésorerie et les pays les plus individualistes moins. A l'intérieur des Etats-Unis, ils montrent que les firmes situées dans les états à forte répugnance pour l'incertitude détiennent plus de trésorerie et celles situées dans des états à fort individualisme moins. Enfin, ils montrent que l'individualisme est positivement et significativement associé aux dépenses d'investissement, aux fusions et acquisitions et aux rachats alors que la répugnance à l'incertitude a des associations négatives et significatives.

Pevzner, Xie et Xin (2015) étudient comment la confiance, comme dimension de la culture, a un impact sur la perception des investisseurs et les modes de diffusion de l'information financière communiquée par les entreprises. Les auteurs utilisent la mesure du niveau de confiance provenant du World Value Survey et analysent ses effets sur les réactions du marché (mesurées par des volumes anormaux et la variance des rendements anormaux) aux annonces des résultats par les entreprises dans 25 pays entre 1995 et 2008. Ils trouvent de fortes réactions du marché pour les annonces de résultats faites par des firmes situées dans des pays à très haut niveau de confiance. Ces résultats suggèrent que les mêmes annonces de résultats faites par des firmes peuvent être interprétées différemment selon les pays et leur culture. Enfin, ils montrent que les effets positifs de la confiance sur les réactions du marché sont plus prononcés dans les pays à faible protection des investisseurs et à faible exigence en matière de publication, ce qui suggère que la confiance agit comme un substitut aux institutions formelles du pays.

El Ghoul et Zheng (2015) étudient l'impact des quatre dimensions de la culture de Hofstede (individualisme/collectivisme, répugnance à l'incertitude, au pouvoir et masculinité/féminité) sur les clauses contractuelles des crédits commerciaux. Leur échantillon contient 335 405 firme/années observations dans 51 pays entre 1992 et 2012. Ils trouvent que ces clauses sont plus restrictives dans

les pays où dominent la distance au pouvoir, la répugnance à l'incertitude, la masculinité et où l'individualisme est découragé dans la culture locale. Ces résultats sont robustes après avoir contrôlé les effets spécifiques aux firmes, pays, secteurs et l'introduction d'autres mesures de la culture nationale.

Dodd, Frijns et Gilbert (2015) utilisent les dimensions de la culture de Hofstede (individualisme/collectivisme, répugnance à l'incertitude, au pouvoir et masculinité/féminité) et étudient le rôle de la culture dans les décisions des firmes d'être cotées sur plusieurs bourses. Ils exploitent un échantillon de 2 803 multi cotations dans 45 pays entre 1985 et 2006. Ils trouvent que les firmes des nations développées ont tendance à se faire coter dans des pays aux cultures similaires. Enfin, ils montrent que la distance sur les dimensions répugnance à l'incertitude et individualisme affecte les décisions de cotations simultanées. Ces études fournissent de sérieuses bases pour considérer que la culture influence les décisions individuelles.

2.4 : Culture et fusions et acquisitions

Dans la littérature financière, l'étude du rôle de la culture sur l'activité des Fusac est relativement récente. Une des contributions pionnières dans ce courant de littérature est celle d'Ahern, Daminelli et Fracassi (2015). Ils examinent le rôle direct de la culture dans les Fusac en regardant les différences culturelles au sein des opérations transfrontalières et en recourant aux trois mesures de World Value Survey (confiance, hiérarchie et individualisme). En particulier, ces auteurs étudient comment les différences en matière de culture impactent les volumes de transactions de Fusac entre pays et leurs gains en synergie. Ils utilisent un échantillon de 104 652 fusions incluant 20 893 fusions transfrontalières et 83 759 fusions domestiques où 50% au moins de la cible sont acquis. 52 pays sont couverts entre 1985 et 2008. Dans le cadre de modèles de gravité, ils trouvent une forte évidence selon laquelle les différences dans les cultures nationales réduisent les volumes de fusions transfrontalières, tout en prenant en compte à titre de contrôle d'autres déterminants possibles dans le pays hôte. Ces résultats soutiennent la thèse de l'impact des différences de culture sur les fusions transfrontalières. En particulier, ils mettent en évidence que plus la distance entre les pays est grande par rapport aux trois dimensions de la culture, plus faible est le volume de fusions transfrontalières

entre ces deux pays[6]. De plus, plus la distance est grande, plus bas sont les gains de synergie (mesurés à travers les rendements combinés à la date d'annonce des titres de l'acquéreur et de la cible). Ces résultats sont robustes après prise en compte d'effets fixes par année, par pays, aux variables de paires de pays et de niveaux de transaction, et enfin de recours à des variables instrumentales pour les différences culturelles, fondées sur des différence génétiques ou de pathologies.

Frijins, Gilbert, Lehnert et Tourani-Rad (2013) utilisent la dimension répugnance à l'incertitude de la mesure de Hofstede comme variable approchée de la tolérance au risque du PDG. Ils étudient les effets de la culture du marché d'origine sur les fusions et acquisitions internationales à but de diversification. Leur échantillon comprend 25 750 transactions de Fusac entre 1990 et 2008. Ils montrent une association fortement négative entre la répugnance à l'incertitude et l'activité en fusions et acquisitions internationales et diversifiantes. Ils mettent aussi en évidence que les acquéreurs de pays à forte répugnance à l'incertitude exigent des premiums plus élevés. Ils montrent que l'effet du trait culturel répugnance à l'incertitude est plus marqué dans les grandes opérations de prise de contrôle. Lim, Makhija et Shenkar (2015) établissent que l'impact de la distance entre cultures peut être asymétrique. En utilisant un échantillon de 1 690 opérations transfrontalières impliquant une firme américaine comme acquéreur et une cible de l'un des 45 pays autres entre 1990 et 2009, ils montrent que les acquéreurs US paient des premiums moindres pour des cibles étrangères situées dans des pays plus éloignés selon la dimension culturelle, telle qu'elle est appréhendée par Hofstede. Mais, ce phénomène ne vaut pas quand il s'agit d'un acquéreur étranger achetant une cible américaine. L'effet négatif attribué à la culture est alors effacé quand les offreurs sont familiers avec la culture du pays de la cible.

Toutes les fusions acquisitions transfrontalières ne sont pas égales. Acquérir une firme dans un pays culturellement proche est vraisemblablement une expérience différente que réaliser des acquisitions dans des sociétés culturellement différentes. Cette thèse contribue, au second chapitre, à la littérature croissante sur les effets de la culture sur l'activité des Fusac en portant un regard sur les fusions et acquisitions internationales tout en considérant une perspective interculturelle. Enfin, la littérature

[6] Dans la littérature sur les affaires internationales (IB), Chakrabarti, Gupta-Mukherjee et Jayaraman (2009) utilisent un échantillon de 800 opérations transfrontalières entre 1991 et 2004 et proposent des résultats contraires. Ils trouvent que la distance entre culture, mesurée par les quatre dimensions de Hofstede, augmente la performance des fusions et acquisitions transfrontalières. Leurs résultats sont robustes à l'introduction de diverses variables proxy pour la culture, de variables caractéristiques des transactions, d'effets fixes pays et de différentes mesures de performance.

existante se concentre soit sur les caractéristiques culturelles du pays de l'acquéreur, soit sur la distance entre les cultures des pays de l'acquéreur et de la cible, alors que les effets des valeurs culturelles propres au seul pays de la cible sont généralement négligés. Toutefois, Aktas, de Bodt et Roll (2010) et Aktas, de Bodt, Bollaert et Roll (2016) mettent en évidence que 40% des fusions et acquisitions sont initiées aux USA par les firmes cibles. Cette évidence suggère que le management des firmes cibles n'est pas passif et qu'il exerce vraisemblablement un rôle égal dans les décisions de prise de contrôle. En supposant que ce phénomène observé aux USA vaut dans le cadre international, le troisième chapitre explore les effets des valeurs culturelles sur l'activité en Fusac du point de vue des pays des cibles.

"Take-overs, like bankruptcy, represent one of Nature's methods of eliminating deadwood in the struggle for survival. A more open and more efficiently responsive corporate society can result." [Samuelson 1970, p. 505]

1. General Introduction:

Mergers and acquisitions[7] (M&A) are among the important economic events that managers undertake in a company's life with first order implications for the re-allocation of resources among firms. These economic events provide an opportunity to the researchers to investigate the value impacts of the management decisions and the bidding behaviors. They further present a way to gain insight on the complex set of contractual devices and mechanisms that are developed to enable the transactions go through. A large literature has developed to understand the motives of mergers and acquisitions activity and covered a wide range of topics but most of the studies are US centric. In top 4 academic journals[8], the number of studies published between 2000 and 2012 on mergers and acquisitions topic are 185, out of which 165 (89.20%) are US based, 8 of them (4.32%) are focusing on non-US single country while 4 of them (2.16%) emphasize on European countries, and only 8 studies (4.32%) are covering large number of countries around the world[9]. Betton, Eckbo and Thorburn (2008) provide an extensive review of literature on market for corporate control.

The volume of mergers and acquisitions worldwide has been increased significantly[10] during the last two decades due to increased globalization, various economic initiatives, financial liberalization, trade-links, technological enhancements and deregulation, among other factors. The average annual mergers and acquisitions transactions value around the world over period of 1985 – 2014 was $2.257 trillion with peak transactions values in 1999 and 2007 worth of $4.454 trillion and $5.843 trillion, respectively. Dollar transaction value of M&A ($403 Billion) by rest of the

[7] Throughout the thesis, I will use terms 'mergers and acquisitions', 'M&A', 'mergers' and 'takeovers' interchangeably.
[8] Include Journal of Finance (JF), Review of Financial Studies (RFS), Journal of Financial Economics (JFE) and Journal of Financial and Quantitative Analysis (JFQA).
[9] I thank Helen Bollaert for sharing her survey data.
[10] For example, in 2014 alone, M&A activity worth of $4.4 trillion has been noted which is approximately 5% of the world gross domestic product (GDP). *(Source: SDC Database and World Bank Indicators)*

world (ROW) countries surpassed the dollar transaction value of M&A ($302 Billion) by USA in 1990, and USA dominance on market for corporate control turned back in 1993. The ROW countries started becoming more active relative to USA in late 90s and kept dominating the USA market afterwards. The highest peak of M&A transactions value by ROW countries was observed in 2007 worth of $3.596 trillion. In terms of the number of mergers and acquisitions transactions, ROW countries surpassed the USA market in 1988 and continued this trend. The volume of the transactions also increased significantly over the period of time. Between 1985 – 2014, 70% of announced mergers and acquisitions transactions did not involve a USA firm as an acquirer.

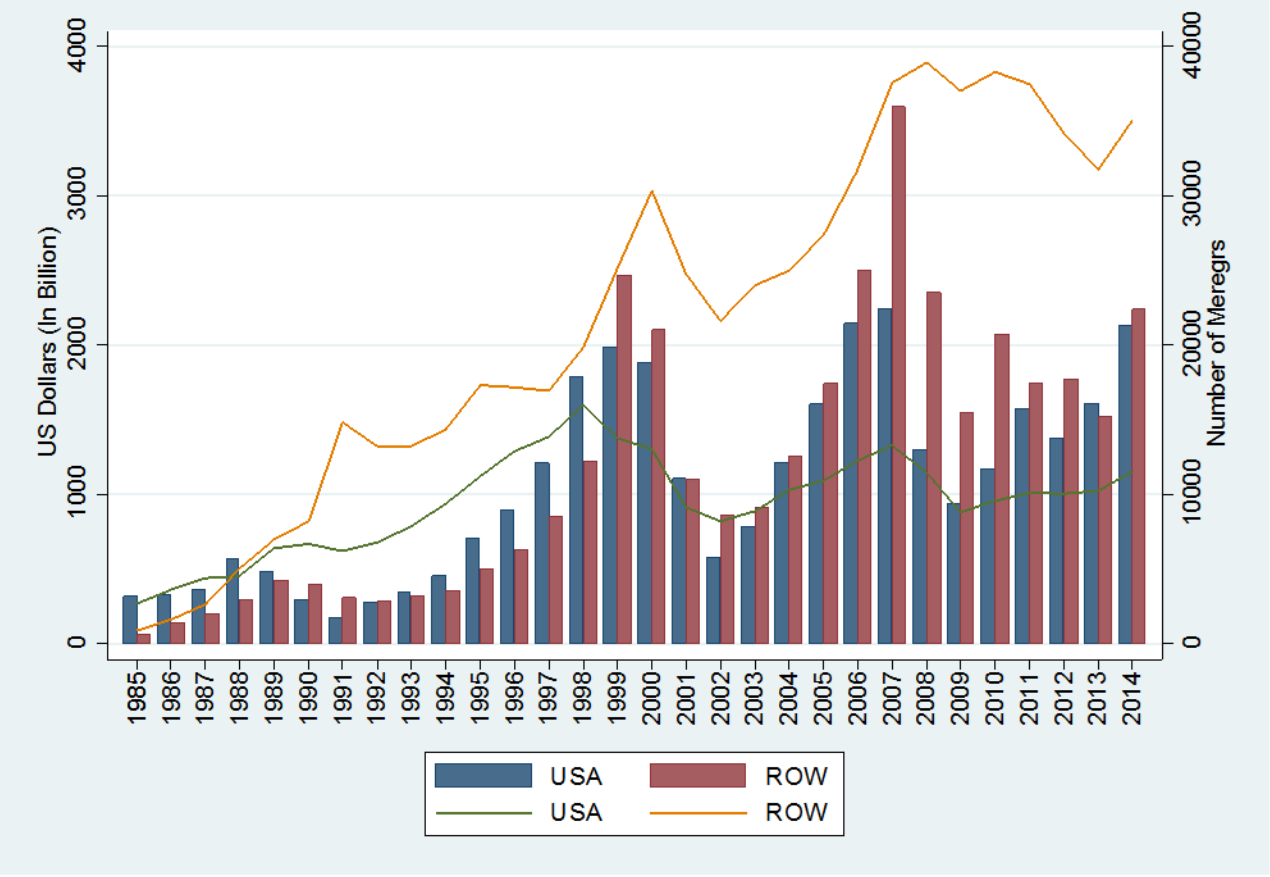


Figure: The figure shows the announced mergers and acquisitions of USA and ROW (rest of world) countries across period starting from 1985 to 2014. (Source: SDC Database)

The average M&A dollar volume scaled by GDP for ROW countries is 3.50% during 1985 – 2014 as opposed to 6.50% for US. The volume of M&A for ROW countries in 1985 was 0.68% which rose to as high as 9.45% in 1999. The last two decades show that M&A activity has become an import part of market economy for ROW countries globally. Despite large economic magnitude of M&A activity worldwide, there is a little systematic evidence on the size and dynamics of international M&A transactions.

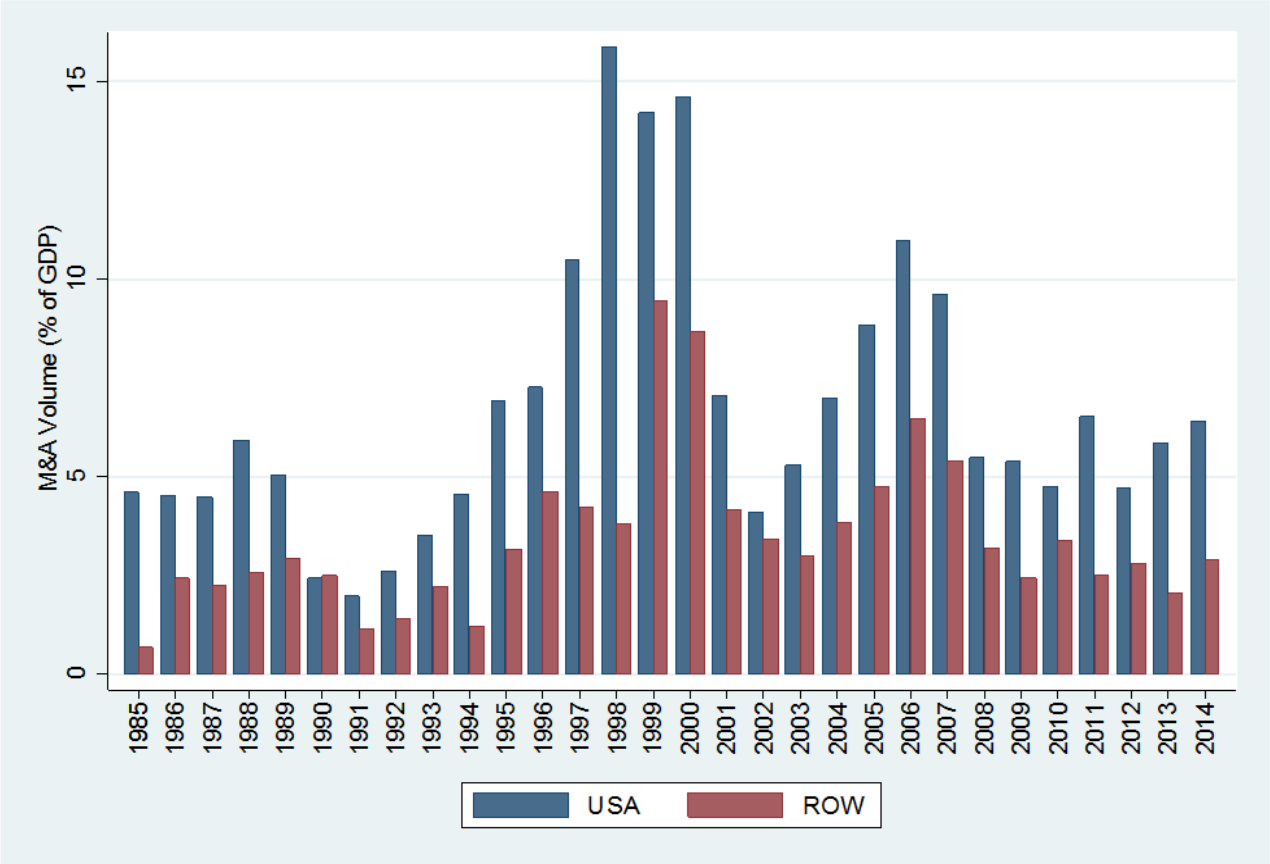


Figure: The figure shows the aggregate transaction value of completed mergers and acquisitions of USA and ROW (rest of world) countries scaled by US GDP and aggregate GDP of ROW countries respectively, across period starting from 1985 to 2014. (Source: SDC Database and World Bank Indicators)

Mergers and acquisitions activity allows firms to take advantage from economies of scale and scope, gain market share and access to scant resources entrenched in specific institutional environment without incurring huge startup costs (Finkelstein and Cooper: 2012). Practically, international mergers and acquisitions take place while having the same motives as the domestic ones. However, while analyzing international M&A activity across countries, various additional

factors add frictions in determining the firms' decisions besides economic motivations which include governance related factors (Rossi and Volpin: 2004), legal and institutional environment (Bris and Cabolis: 2008), quality of accounting disclosures, bilateral trade, geography and valuation differences (Erel, Liao and Weisbach: 2012), behavioral biases (Ferris, Jayaraman and Sabherwal: 2013) and cultural values (Ahern, Daminelli and Fracassi: 2015), among others. International mergers and acquisitions activity is affected by the characteristics of acquirer and target countries.

The thesis attempts to deepen our understanding for the effects of institutions on international mergers and acquisitions activity worldwide. North (1990, p.4) states "institutions include any form of constraint that human beings devise to shape human interaction", and they can be formal or informal. Li and Zahra (2012) define formal institutions as "a set of political, economic and contractual rules that regulate individual behavior" and North (1990) defines informal institutions as customs, beliefs, traditions and religious norms rooting a society. Formal institutions can be changed overnight while informal institutions are the slowest changing institutions. Many scholars today agree that institutions matter. Both formal and informal institutions are considered important ingredients of contracting environment (North: 1990, North: 1991). Strategic behavior of firms is shaped by the institutional environment of the countries where the firms are located and resultantly affect the different economic decisions (North: 1990; Scott: 2001). Differences in both formal and informal constraints across countries should be considered seriously as a plausible explanation for diversity in economic decision making. I mainly focus on the effects of labor market institutions that imped a formal constraint and national culture as an informal constraint on the firm behavior, particularly in M&A context.

2. Related Literature:

This section reviews the existing literature and key findings are summarized in Appendix.

2.1. Formal Institutions and Mergers and Acquisitions:

There is a growing literature highlighting the importance of formal institutions in explaining the M&A activity around the world. Few studies have explored the effects cross-country differences of corporate governance (formal institution) on M&A activity. Using sample of 45,686 mergers

and acquisitions announced by public firms during 90s and completed by end of year 2002 across 49 countries worldwide, Rossi and Volpin (2004) document that cross-country differences in laws and regulations explain the mergers and acquisitions activity. They show that volume of M&A activity is larger in the countries with better accounting standards and stronger shareholder protections. They further show the negative relationship between likelihood of all-cash deals and level of shareholder protection of acquirer countries. In cross-border mergers, targets are from the countries with weaker investor protection which suggest that cross-border transactions play a governance role by enhancing the corporate governance standards of target firms.

Corporate governance practices vary within and across countries. Bris, Brisley and Cabolis (2008) argue that international M&A allow firms to change the level of investor protection, and investigate the relationship between changes in corporate governance quality and firm performance at industry level. Using sample of 7,330 cross-border mergers across 41 countries during 1990 – 2001, they show that the Tobin's *Q* of firms within that industry increases when the firms are acquired by foreign firms from the countries that have better investor protection and better accounting standards. They argue that target firms can adopt better investor protection after takeovers and markets assign value to better protection. Martynova and Renneboog (2008) use sample of 2,419 M&A deals from 29 European countries undertaken during 1993 – 2001 which includes 737 cross-border mergers and show that differences in corporate governance – measured by shareholder, minority shareholder and creditors protection indices – between acquirer and target countries impact the merger returns. Bris and Cabolis (2008) argue that following international law, target firms acquire the status of a national of acquirer country in a cross-border acquisition of 100% of target shares, which make them exposed to corporate governance system of the acquirer country. Banking on this argument, they investigate the effects of change in investor protection following cross-border acquisitions in a sample of 506 cross-border acquisitions across 39 countries between 1989 and 2002 and show that better shareholder protection and accounting standards in the bidders' country leads to higher acquisition premium in cross-border acquisitions relative to matched sample of domestic acquisitions. In the same vein, Starks and Wei (2013) investigate the effects of variation in corporate governance system of 371 foreign acquisitions of US target firms between 1980 and 1998, and find that merger premium is negatively associated

with the quality of corporate governance of acquirer countries for the transactions completed with stock, which indicates that foreign acquirers compensate the shareholders of US target firms for their exposure to weaker corporate governance system. They further find that acquirers' cumulative abnormal returns around announcement date increase with the quality of corporate governance in stock offers and that foreign acquirers with better corporate governance system are likely to make stock offers.

Buch and DeLong (2004) examine the factors that explain international bank mergers using sample of 3,000 bank M&As during 1985 to 2001. They show that information cost reduces the volume of cross-border bank mergers and regulating differences also affect the cross-border mergers and acquisitions activity. Focarellia and Pozzolob (2008) examine what factors can explain the variation in internationalization strategy of the firms using sample of 403 cross-border M&As by financial companies across 47 countries during 1990 – 2003, particularly banks and insurance companies. They show that internationalization strategy of the firms globally follows the same patterns and find that geographical distance, economic and cultural factors explain the patterns of internationalization of the firms. Geographical distance, and cultural and economic integration play a key role in the financial companies' expansion abroad.

Ferreira, Massa and Matos (2010) investigate the role of institutional investors in foreign M&As. They use sample of 3,631 completed mergers and acquisitions by public firms which includes 786 cross-border mergers from 26 countries during 2000 – 2005 and provide an empirical evidence that presence of foreign institutional ownership is positively and significantly related to the cross-border mergers and acquisitions activity across the world. Building on the hypothesis that foreign institutional investors play a role of facilitator in the international market for corporate control and help in reducing the transaction costs and information asymmetry between acquirers and targets, they show that foreign institutional ownership enhances the likelihood that M&A transaction is cross-border, successful, and acquirer takes control of target firm. They further find that positive relationship between foreign institutional ownership and merger outcomes is stronger in countries with the weaker legal institutions and less developed capital markets. Bris, Cabolis and Janowski (2010) using sample of 62,119 M&A transactions in 41 countries during 1990 – 2001 and Lel and

Miller (2015) using sample of 41,792 M&A transactions across 34 countries during 1992 – 2003 document that countries adopting takeover and anti-trust laws experience an increase in aggregate mergers and acquisitions activity.

Existing literature investigating the motives of cross-border mergers mainly focus on mergers and acquisitions involving US firms and limit their analysis to public firms. Erel, Liao and Weisbach (2012) document that one third of worldwide mergers are cross-border and incidence of cross-border mergers has significantly been increased over time, from 28% in 1998 to 45% in 2007. In their analysis, they also include private firms and investigate the factors that are likely to affect the cross-border M&As but are not at play for domestic M&As at the same intensity. They use a sample of 56,978 cross-border M&As completed between 1990 and 2007 from 48 countries around the world. The authors unveil interesting facts by showing that 96% of the M&A transactions involve a private target, 26% involve private acquirer and 97% of the transactions either have private acquirers or targets. Furthermore, they show that 80% of transactions involve non US target firms and 75% of the acquirers are from rest of the world countries. They find that in addition to the factors that motivate the domestic mergers and acquisitions activity, additional factors including geographical proximity, quality of accounting disclosure and bilateral trade increase the probability of cross-borders M&As. Firms from countries who observed an increase in stock market in value, appreciation of currency and relative increase in market-to-book ratio are also more likely to be acquirer and firms from poor performing countries tend to be target.

Lin, Officer and Shen (2014) use sample of 12,030 completed M&A transactions in 62 countries during 1996 – 2012 and show that combining currency appreciation and agency conflict play a crucial role in the value creation for acquirer shareholders. They provide evidence that acquirers from countries whose currency experience large appreciation experience significantly high and positive CAR around the announcement date and post-merger period. They find that the positive relation between currency appreciation and CAR is stronger in acquirer countries with strong shareholder protection and acquirers with better corporate governance. They further show that acquirers from countries with weaker shareholder protection lean to pay excessively to foreign target firms following a currency appreciation.

Brockman, Rui and Zou (2013) explore how does firms' political connections explain the mergers and acquisitions performance. Using sample of 509 M&A transactions between 1993 – 2004 completed by politically connected acquirers and matched non-connected acquirers from 22 countries, they find that political connections of acquirer firms play an important and economically significant role in post-merger takeover performance and the nature of this relationship depends on the institutional environment of the countries. They show that politically connected acquirer firms underperform the non-connected firms located in countries with strong legal system or low level of corruption and on the other hand, politically connected bidder firms outperform the non-connected in the countries with weaker legal system or high level of corruption.

Serdar, Dinc and Erel (2013) use hand-collected data of 415 M&A transactions announced and completed during 1997 – 2006 to study the government reactions to large corporate takeover attempts in fifteen European Union countries. They show that economic nationalism is a widespread phenomenon in which government has strong preference for the domestic M&A transactions rather cross-border mergers. These preferences are pronounced in times and countries that have far-right parties and weaker government. One recent study, Karolyi and Taboada (2015), exploits the cross-country differences of regulatory arbitrage and authors show that, in sample of 7,296 bank acquisitions in 78 countries during 1995 – 2012, the acquirers tend to be from the countries with stringent capital requirements, high restrictions on bank activities and stronger supervisions. Further, they show that target firms' cumulative abnormal returns are higher and larger when the acquirers are from the countries with stricter capital requirements, better private monitoring and high restrictions on banking activities.

2.2. Labor Market Institutions and Mergers and Acquisitions:

Cost reduction – gained from wage and employment conditions – in order to achieve economies of scale and scope is often considered the main driver in many of M&As (Devos, Kadapakkam, and Krishnamurthy: 2009), which is obtained by restructuring labor force after the mergers. Consequently, M&As give rise to substantial conflict of interest between employees and shareholders. Employees bargaining power determines the intensity of their influence on the firms' takeover attempt. Therefore, employment consideration is one of the important issues in M&A

activity. US-centric studies provide comprehensive evidence on the effects of labor market institutions – employment protection regulations and unionization – on corporate takeovers. Becker (1995) analyzes 300 large US M&As made by public firms during 80s and show that unionized target firms enjoy higher takeover premium from M&A activity than that the non-unionized target firms. These higher gains enjoyed by shareholders reflected as re-appropriation of employee 'rents'. In the same vein, Li (2012) exploits establishment-level data from US census bureau and analyzes the wage and employment outcomes in 4000 listed firms acquired between 1981 – 2002. He finds that target firms with strong labor unions show more shrinkage in wage and employment after a takeover than the comparable firms. This indicates that employees of target firms are negatively affected by takeovers and that labor unions do not protect them from these negative effects. On the contrary, Tian and Wang (2014) use "locally" exogenous variation generated by union elections that pass or fail by a small margin of votes and explore the effect of unionization on a firm's takeover exposure and merger gains in sample of 8,092 M&A deals between 1978 and 2009. They show that barely unionized firms receive less takeover bids, enjoy lower announcement returns and receive lower offer premium. John, Anzhela and Diana (2015) use state variation in labor rights laws and find that acquirers with strong labor rights experience lower announcement returns in sample of 13,838 M&A deals between 1985 and 2009. They attribute the effect to such acquirers pursuing deals that are not in the best interest of the acquirer's shareholders, consistent with employee-shareholder agency conflicts limiting shareholder gains and synergies from the acquisition.

Extant literature provides some empirical evidence for the effects of cross-country differences in employment protection on M&A activity but these studies mainly focus on the employment protection laws. For example, Alimov (2015) uses sample of 53,583 cross-border M&A transactions in 28 countries during 1991 – 2009 and provides evidence that strict employment protection regulations in target countries are linked with higher level of cross border takeover activity, especially when acquirers are from countries with lesser employment protection. Institutional environment of the country ascertains the existence of particular type of firms. Acquirers intend to carefully select the target firms from the right host country. Levin, Lin and Shen (2015) investigate the impact of employment protection laws on firm profitability and CAR

around announcement date in 11,425 cross-border M&As undertaken during 1991 – 2012 across 50 countries. They find that acquirer firms experience lower CAR around announcement date and profits when the targets are located in the countries with higher employment protection afforded by strict employment protection laws. The results are more pronounced in high labor-intensity and high labor volatility industries. They further show that acquirers make fewer and smaller M&As with the target firms located in the countries with strong employment protection laws. Dessaint, Gobulov, and Volpin (2015) exploit the employment protection reforms across 21 OECD countries from 1985 – 2007 and show that stronger employment protection reduces takeover activity, combined firm gains and takeover premium, in a sample of 45,696 M&A transactions. Additionally, they find that employment protection hinders the layoffs after takeover and the takeovers with potential for labor force reorganization represent a significant reduction in net synergies.

Labor market institutions (formal constraint) are institutions governing employment and wage security/flexibility. They are mainly governed by two components, (1) employment protection Laws and (2) collective bargaining. Although strong employment protection laws give employees more *de jure* bargaining power, they tell us little about employees' *effective* bargaining power in a particular country; that is, how a particular dispute is resolved in practice, given labor market stance and union density. In fact, countries may embrace strict employment protection legislation reforms as a try to achieve at least moderate actual employment protection. Kanbur and Ronconi (2016) document a negative correlation between the stringency of employment legislations and the intensity of their enforcement. Both institutions may not have identical effects. As documented above, the main focus of existing literature is on the role of employment protection laws in explaining the cross-country differences of takeover activity across countries. One question naturally arises: what is the specific effect (if any) of actual employment protection on takeover activity? The first chapter of the thesis mainly focus on actual employment protection afforded by collective bargaining as proxy of formal institution to study its effects on M&A activity around the world.

2.3. Informal Institutions and Finance:

It is acknowledged in finance literature that culture as an informal institution affects the behaviors of the individuals (see for example: Stulz and Williamson (2003), Licht, Goldschmidt and Schwartz (2005), and Guiso, Sapienza and Zingales (2008, 2009)), and that behavioral biases affect the actions and economic outcomes (see for example: Roll (1986), Cartwright and Cooper (1995), Malmendier and Tate (2008), Chui, Titman and Wei (2010), Siegel, Licht and Schwartz (2011), Ferris, Jayaraman and Sabherwal (2013), Aktas, de Bodt, Bollaert and Roll. (2016)). Culture affects the way people process the information and translate the situations, resultantly has an effect on their economic decision making. Notwithstanding, the cultural values of the countries influence the collective behavior of the individuals or groups, despite the fact these individuals behave differently. I focus on the national cultural values and investigate the effects of cross-country differences in cultural values on different mergers and acquisitions outcomes. Hofstede (2001, p.385) states "the finance function has been the last stronghold in business administration to escape cross-cultural analysis". Studying effects of culture in finance started indeed as late as early 2000s.

One of the pioneer studies in finance literature is Grinblatt and Keloharju (2001). Using unique ownership and trade dataset of 93 public companies in Finland from Finnish Central Securities Depositary (FCSD) for approximately two years between December 27, 1994, and January 10, 1997, they show that there is high probability that investors hold, buy and sell the stocks of Finnish firms that have higher familiarity with them, and they attribute the familiarity to geographical distance (located close to the investors), culture (CEOs of the same cultural backgrounds) and language (speak their native language). These three familiarity attributes explain the investors' preferences for certain stocks. Stulz and Williamson (2003) focus on religion, defined by the principal religion of the largest proportion of the population of the country, and explains its effects on legal protection of shareholders and creditors across countries. They find that catholic countries protect the creditors' rights less effectively than protestant countries. They further argue that culture proxies help in better understanding of how investors' rights are imposed across world. Guiso, Sapienza and Zingales (2008) use trust as proxy of culture and investigate its effects on stock market participation (the most trusting and greater level of participation). They show less

trusting individuals are less likely to buy stocks. These studies highlight the importance of culture in economic decision making but do not use cultural attributes developed by cross-cultural studies[11].

Chui, Titman and Wei (2010) is the first study in this stream of literature that uses individualism culture dimension of Hofstede (2001). The authors relate individualism with overconfidence and self-attribution bias while using stock returns and trading volume data from 55 countries during 1980 – 2003. The study shows that individualism culture dimension is positively linked with trading volume and volatility as well as the magnitude of momentum profits. Using mutual fund holdings data from 26 countries for the years 1999 and 2002, Beugelsdijk and Frijns (2010) document that culture explains foreign bias in international allocation of assets. They use uncertainty avoidance and individualism dimensions of culture and find that uncertainty avoidance countries allocate less to foreign market and individualistic countries are more aggressive in foreign assets allocation. They further show that cultural distance between two countries also affect the amount of allocation to that market. On the same line of research, Anderson, Fedenia, Hirschey and Skiba (2011) explore the determinants of international diversification with main focus on institutionally managed portfolio across 60 countries worldwide for the year ending 2006 and document that investment funds from uncertainty avoidance countries exhibit greater home bias and diversify less in their foreign holdings; investment funds from countries with higher masculinity and long-term orientation in their culture exhibit lower home bias and investment funds from countries emphasizing masculinity diversify more abroad. They further argue that the size of effect is economically significant and ascertain the fact that culture directly affects the investors' behaviors rather than indirect effects (for example through legal and regulatory framework). Siegel, Licht and Schwartz (2011) study the effects of egalitarianism culture dimension on international investment flows in 50 countries during 1995 – 2008. They document that distance between countries on egalitarianism culture dimension of Schwartz (1994, 1999, 2004) strongly and negatively influences the inter-country flows of bond and equity issuance, syndicated loans and cross-border M&As.

[11] Hofstede (1980, 2001), Schwartz (1992, 1994, 1999), House, Hanges, Javidan, Dorfman and Gupta (2004), The World Value Survey (WVS, http://www.worldvaluessurvey.org).

Zheng, El Ghoul, Guedhami and Kwok (2012) investigate the effects of culture on corporate debt maturity. They argue that culture as an informal institution have strong effects on the humans' incentives and choices in economic exchange. They use four culture dimensions (uncertainty avoidance, collectivism, power distance and masculinity) and using large sample of 114,723 firm-year observations across 40 countries between 1991 and 2006, provide strong empirical evidence that the countries that emphasize on these four dimensions are likely to use more short-term debt after controlling for the formal constraints including legal, political, financial and economic institutions. Aggarwal, Kearney and Lucey (2012) exploit the large dataset of foreign debt and equity portfolio from IMF across large number of 174 originating and 50 destination nations during 2001 to 2007 and examine the role played by culture in foreign portfolio investment. They find that cultural traits (individualism, masculinity, power distance and uncertainty avoidance) of originating and destination nations, and cultural distance between originating and destination nations, interact with geographical distance and gravity variables to ascertain the foreign portfolio investment patters across the world.

Li, Griffin, Yue and Zhao (2013) posit that culture affects the corporate risk taking by directly influencing the managerial decision-making. To investigate the effects of culture on corporate risk taking, they use firm-level data from 35 countries between 1997 and 2006 and use linear hierarchical modeling to separate the effects of firm and country level variables and find that individualism is positively related with corporate risk taking while uncertainty avoidance and harmony are negatively related to corporate risk taking. They further show that greater earning discretions reinforce the relationship and that larger firm size weakens the relationship between culture and corporate risk taking. Lievenbrück and Schmid (2014) investigate the effects of culture on firms' hedging decisions and using hand collected data of utility energies in 50 countries worldwide during 2000 – 2009, they find that long-term oriented countries are less likely to hedge and have lower hedged volume. Furthermore, they observe lesser volume of hedging with options in the countries that emphasize on masculinity in their culture. They conclude that culture has strong effect on firms hedging decisions and that the size of the impact is economically large such that it cannot be explained by other economic and institutional differences across countries.

Holderness (2014) investigates the role of culture in connection with the ownership structure of 8,076 listed firms from 32 countries. Using egalitarianism culture dimension, he finds that ownership of the listed firms becomes more concentrated in the societies that have strong preferences for being equal in treatment in contrast to hierarchical treatment of individuals. Kwok and Tadesse (2006) show that culture explains the variation of financial systems across 41 countries. They find that the countries emphasizing uncertainty avoidance culture dimension in their culture are likely to have bank-based system. Cline and Williamson (2015) examine how does culture influence the corporate self-dealing. Using trust culture dimension from world value survey (WVS), they find that trust in strangers is negatively and significantly related to formal self-dealing regulation, proxied by anti self-dealing index (Djankov, La Porta, Lopez-de-Silanes, and Shleifer: 2008)) in 71 countries. Griffin, Guedhami, Kwok, Li and Shao (2014) explore the effects of culture on the corporate governance practices within firms and across countries. Using comprehensive corporate governance firm level data for large number of 38 countries during 2006 – 2011 and applying linear hierarchical modelling technique, they find that firms located in the countries that emphasize on individualism culture dimension and discourage uncertainty avoidance in their culture are positively and significantly linked with firm level corporate governance practices.

Eun, Wang and Xiao (2015) document that culture affects stock price synchronicity. Using data from 47 countries during 1990 – 2010, they find that stock prices tend to move together in culturally tight and collectivistic countries, similarly, stock prices move less together in culturally loose and individualistic countries. Trade and financial openness status of the countries weakens this relationship. Chen, Dou, Rhee, Truong and Veeraraghavan (2015) examine whether cultural values of the countries explain the variations in corporate cash holdings across countries worldwide and within United States. In cross-country analysis, they use sample of 27,801 firms in 41 countries from 1989 to 2009 and find that uncertainty avoidance countries tend to hold more cash and individualistic countries are more likely to hold less cash. Within United States, they show that firms located in high uncertainty avoidance states hold more cash and the firms located in the states emphasizing on individualism hold less cash. They further show that individualism is

positively and significantly related to capital expenditures, M&As and repurchases while uncertainty avoidance has strong and negative relationships.

Pevzner, Xie and Xin (2015) explore how does trust level (a culture dimension) impact the investors' perception and the way they use the financial information disclosed by firms. Authors use trust culture dimension from world value survey and explore its effects on the market reactions (measured by abnormal trading volume and abnormal stock returns variance) to corporate earnings announcements across 25 countries from1995 to 2008. They find the strong market reactions for the corporate earnings announcements made by firms located in countries with high level of trust. These results suggest that same earnings announcements made by firms can be taken differently across different countries depending on their culture. They further show that the positive effects of country's level of trust on market reaction is more pronounced in the countries with weaker investor protection and disclosure requirements which means that trust act as a substitute to the country's formal institution.

El Ghoul and Zheng (2015) examine the impact of Hofstede's four culture dimensions (individualism/collectivism, uncertainty avoidance, power distance and masculinity/femininity) on trade credit provision in a sample of 335,405 firm-year observations across 51 countries from 1992 – 2012. They find that trade credit provisions are higher in countries that emphasize on power distance, uncertainty avoidance, masculinity and discourage individualism in their culture. Their results are robust after controlling for firm, country, industry characteristics and alternative measures of national culture.

Dodd, Frijns and Gilbert (2015) use Hofstede culture dimensions (individualism/collectivism, uncertainty avoidance, power distance and masculinity /femininity) and investigate the role of culture on firms' decisions to cross-list, in a sample of 2,803 cross-listings across 45 countries between 1985 and 2006. They find that firms from developed nations tend to cross-list in the countries with cultural similarities. They further find that cultural distance on uncertainty avoidance and individualism affect the firms' cross-listing decisions. These studies provide strong basis that culture affects the individual decisions making.

2.4. Culture and Mergers and Acquisitions:

In finance literature, studying the role of culture on M&A activity is relatively recent. One of the pioneer studies in this stream of literature is Ahern, Daminelli and Fracassi (2015), they examine the direct role of culture in M&As by exploring the cultural differences in cross-border M&As using three dimensions of world value survey (trust, hierarchy and individualism). In particular, the authors study how does culture distance impact the volume of cross-border M&A deals between countries and synergy gains. They use sample of 104,652 mergers which includes 20,893 cross-border mergers and 83,759 domestic mergers where 50% of target is purchased from 52 countries between 1985 and 2008. Within gravity model framework, they find strong evidence that differences in national culture reduce the volume of cross-border mergers, while controlling for a host of other possible determinants. These results are consistent with the hypothesis that cultural differences impede cross-border mergers. In particular, they find that the greater is the distance between two countries along each of the three cultural dimensions, the smaller is the volume of cross-border mergers between the countries[12]. In addition, greater cultural distance also leads to lower synergy gains, as proxied by the combined announcement returns of acquirers and targets. These findings are robust to year and country-level fixed effects, time-varying country-pair and deal-level variables, as well as instrumental variables for cultural differences based on genetic and somatic differences.

Frijins, Gilbert, Lehnert and Tourani-Rad (2013) use Hofstede's uncertainty avoidance culture dimension as a proxy of CEO's risk tolerance and explore the effects of home market culture on the diversifying international M&As, in a sample of 25,750 M&A transactions from 39 countries between 1990 and 2008. They show strong negative relation of uncertainty avoidance with diversifying international mergers and acquisitions activity. They also provide evidence that acquirers from high uncertainty avoidance countries requires higher premium and show that effect of uncertainty avoidance cultural trait is more pronounced in large takeovers. Lim, Makhija and

[12] In international business literature (IB), Chakrabarti, Gupta-Mukherjee and Jayaraman (2009) use sample of 800 cross-border during the period 1991 – 2004 and show the contrary results. They find that cultural distance, measured by Hofstede's culture dimensions, increases the performance of cross-border mergers and acquisitions. Their findings are robust to different proxies of culture, deal characteristics, country fixed effects and different measures of performance.

Shenkar (2015) posit that impact of culture distance can be asymmetrical and using sample of 1,690 cross-border M&A transactions involving US firm as an acquirer or a target from 45 countries between 1990 and 2009, they show that US acquirers pay less premium to foreign targets with greater culture distance measured by Hofstede' culture framework but this phenomenon does not hold for foreign acquirers paying US targets. The negative effect of culture distance is wiped out when the bidders are more familiar with target country's culture.

Not all cross-border acquisitions are created equal: acquiring a firm in a culturally similar country is likely to be a qualitatively different experience to making an acquisition in a culturally distinct society. The thesis contributes to the growing literature for the effects of culture on M&A activity by looking at international M&As from a cross-cultural perspective, in second Chapter. Further, the existing literature either focus on cultural characteristics of acquirer countries or the cultural distance between acquirer and target countries, while the effects of cultural values of target countries alone on M&A activity has been neglected so far in the literature. However, Aktas, de Bodt and Roll (2010) and Aktas, de Bodt, Bollaert and Roll. (2016) document that 40% of US mergers and acquisitions transactions are initiated by target firms. These evidences suggest that management of the target firms are not passive bystanders and they are likely to exert an equal role in the corporate takeovers decisions. Assuming this phenomenon observed in US also holds for international market for corporate control, third chapter explores the effects of cultural values on M&As activity from target countries perspective.

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Collective Bargaining and Takeover Activity around the World

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Abstract:

Our results highlight the importance of collective bargaining on the pattern of takeover activity in 46 countries from the early 1990s. We find that the size and dynamics of takeover markets within industries increase in countries with powerful labor unions and high coverage of bargaining coordination. Further analyses show that collective bargaining enhances takeover activity because potential acquirers have greater gain opportunities sourced from the reappropriation of employee rents. In addition, we show that the negative effect of tighter employment legislations on takeovers found in prior works is largely offset by the effect of collective bargaining. Our results provide new insights into the real effects of employment protection in the context of takeovers.

Keywords: collective bargaining, employment protection legislations, labor unions, mergers and acquisitions, premiums, target announcement returns

JEL classification: G30, G34, J51, K31

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1. Introduction

A large literature has developed to understand the importance of rank-and-file employees in the context of mergers and acquisitions (M&A). Recent studies highlight, in particular, that variations in employment legislations play an important role in explaining takeover activity (Alimov, 2015; Dessaint, Golubov and Volpin, 2015; John, Knyazeva and Knyazeva, 2015). This is of particular interest to policymakers and firm stakeholders not only because the surge in takeover activity since the 1990s entails massive reallocation of (human) resources across the world economy, but also because employment legislations can be altered by collective bargaining systems over time. This paper reports a set of novel empirical regularities that counter standard theoretical intuition in the analysis of the role of rank-and-file employees following transfers of ownership and contributes to its understanding by focusing on the differential effect of the two main institutions governing employment protection—namely, collective bargaining and employment legislations—in shaping takeover markets across the globe.

This paper has three goals. The first is to empirically investigate the relationship between the national level of employment protection and takeover activity. The focus of this paper is mostly on collective bargaining. However, we also assess the role of the degree of employment protection afforded by laws and regulations. Two competing views motivate the examination of this relationship. On the one hand, tighter employment protection may hinder workforce restructuring and the associated synergy gains, resulting in less active takeover markets. On the other hand, taking over firms in pro-labor environments allows new employers (i.e., acquirers) to achieve relatively greater gains by recouping larger rents held by target employees, in turn increasing aggregate takeover activity. The merit of these two views is an empirical question. The second goal of this work is to provide further insights into the documented empirical relationship. To do so, we explore the source, magnitude, and direction of wealth transfers between target employees and shareholders. The third goal of the paper is to employ a comprehensive data source on collective bargaining system to document its impact, along with employment legislations, on M&A activity around the world. To the best of our knowledge, this is one of the very first efforts in directly documenting how both institutions of employment protection interact and affect takeovers and mergers. Little is known about their respective effects and how they differ. Indeed, although tighter employment protection legislations give employees more *de jure* bargaining

power, they tell us little about employees' *actual* bargaining power in a particular country; that is, how a particular dispute is resolved in practice, given labor market stance and union density. In fact, countries may embrace strict employment protection legislation reforms as a try to achieve at least moderate actual employment protection. This distinction is not purely hypothetical. From a worldwide sample, Kanbur and Ronconi (2016) find a negative correlation between the stringency of employment legislations and the intensity of their enforcement. Figures 1-3 suggest, more particularly, that collective bargaining and employment legislations do not play an identical role on M&A activity around the world, unveiling that their identification is crucial to better comprehend the labor channel in the M&A literature.

In this paper we focus on the two most salient features of countries' collective bargaining system—namely, union density and bargaining coverage—and examine their impact on the size and dynamics of M&A activity around the world. More specifically, using industry-level data from 46 countries over the period 1992 to 2010, we exploit intertemporal variations in collective bargaining across countries to isolate the industry effects of M&A activity that are caused by union density and bargaining coverage, respectively. Looking at union density and bargaining coverage allows us to identify the impact played by actual (as opposed to de jure) employment protection or degree of labor market rigidity. Indeed, union density captures the strength of labor unions, while bargaining coverage goes some way in capturing the importance of collective agreements as opposed to individual contracts. We consider both features as they do not tell us alone the whole story.[13] As Visser (2003, page 367) explains: "union density is closer to measuring potential union bargaining pressure, … [whereas] bargaining coverage [is] closer to measuring the effectiveness of unions in providing and defending minimum standards of income and employment protection in labor markets."

This paper aims at identifying institutional characteristics of employment protection that are related to M&A activity. The empirical analysis shows that collective bargaining increases the frequency and volume of M&A at the industry level. These results are consistent with the view that differences in countries' collective bargaining protections have a positive and significant effect on M&A activity. The size of the effect is substantial. A one standard deviation increase in

[13] See, for example, Flanagan (1999) and OECD (2004) in the labor economics literature.

union density (resp. bargaining coverage) leads to a 7.2% (resp. 10.7%) increase in the frequency of M&A within industries. Similarly, a one standard deviation increase in union density (resp. bargaining coverage) increases the volume of M&A by 1.7% (resp. 2.6%). In addition to industry-country and industry-year fixed effects, we contemporaneously control for industry levels of competition, leverage, growth prospects and profitability as well as countries' macroeconomic and institutional environment—variables that have been shown to affect M&A activity. In other words, we directly control for industry effects of M&A activity that come through changes in industry-country-level and country-level variables that are brought about by union density and bargaining coverage. Thus, the effect of collective bargaining on the pattern of M&A activity that we document is independent of the other determinants of M&A activity.

The second contribution of the paper is to investigate the economic channel. First, we explore cross-sectional heterogeneity of the relationship. Consistent with the view that a reason of firms' attractiveness is linked to the operational gains from active cost-cutting (including layoffs) after takeovers, we find that the positive relationship between collective bargaining and M&A activity is stronger in labor-intensive industries. Second, we further gauge this cost-cutting channel by estimating the magnitude and direction of wealth transfers from employees to shareholders in target firms. Shleifer and Summers (1988) argue that a large part of the takeover premium comes from rent expropriation from employees. Collective bargaining is generally viewed as a rent-seeking institution that successfully captures quasi-rents, such as higher wage premiums and staffing levels, which could have otherwise flowed to shareholders in the form of higher profits. We show that greater collective bargaining leads to higher takeover premiums accruing to target shareholders, as proxied by the announcement returns of target firms (see Schwert, 2000). In a multivariate regressions accounting for a host of potentially correlated effects, we find that target firms in countries with high collective bargaining protections experience higher announcement returns. As an example, target firms' return around the announcement date increases by 51.9% to 64.2% of its unconditional average of 19.5% when a country's union density rate increases by one standard deviation. For average-sized target firms, this means an expected gain of $96.4-119.1 million. All else equal, collective bargaining protections generate substantial gains for target shareholders. We find similar results when we look at offer premiums. Third, we examine the effects of collective bargaining on post-takeover workforce restructuring. We find that takeovers

and mergers do reduce combined firm employment, but higher collective bargaining protections are associated with greater reduction in the combined firm workforce. This result suggests that post-takeover reduction in staffing levels is an important source of wealth transfers accruing to target shareholders, which further reinforces the cost-cutting channel interpretation of our main results.

The third contribution of the paper is to assess the combined effect of collective bargaining and employment legislations. We confirm the findings of prior works by showing a direct and negative effect of employment protection legislations on the frequency and volume of M&A at the industry level. Then we find that the direct and positive effect of collective bargaining on M&A activity continues to hold after controlling for employment protection legislations. The economic interpretation of these results reveals that collective bargaining considerably mitigates the negative effect of tightened employment legislations.

We also consider a number of alternative explanations for the increased M&A activity in countries with high prevalence of collective bargaining. First, one could argue that our results are due to the quality of legal institutions protecting outside investors. We address this criticism by running "horse races" between our measures of collective bargaining and several indices of legal protections of shareholder rights. We do not find any evidence that the inclusion of these indices attenuates the impact of collective bargaining on M&A activity. Second, because employment protection could incentivize employees to increase their investment in skills and to take more successful and innovative pursuits, countries with high levels of employment protection could constitute a comparative advantage for acquirers in innovation-intensive industries, in turn fostering M&A activity. We show that this innovation-based explanation is inconsistent with the data. Third, a business cycle effect could also drive the observed positive relationship in this study. We show that our results are robust to controlling for recession periods, but also that the effect of collective bargaining is more pronounced during recessions.

Finally, we perform a battery of robustness tests. We gauge the sensitivity of our main results to various subsamples to verify whether our findings are not confined to subsets of particular takeover markets such as in the UK and US, in non-OECD countries, or in heavily regulated industries. As the Scandinavian exception could also drive the results, we repeat our analyses without those

countries. Then we use other data sources for our indicators of collective bargaining. We also verify the robustness of our results to sample selection issues by imposing different criteria to select and weigh the M&A deals included in our analyses. We do not find any evidence that changes our prior conclusions.

This paper contributes to the empirical literature on labor and takeovers. Early works study employment outcomes following takeovers. From hostile takeovers taking place in the 1980s, Bhagat, Shleifer and Vishny (1990) find that layoffs explain 10-20% of the average takeover premium. Brown and Medoff (1988) and Kaplan (1989) find consistent results in other contexts. Among the more recent work, Li (2013) studies productivity changes after takeovers and finds that target plants undergo significant job destruction, among other operating cost reductions. Davis, Haltiwanger, Handley, Jarmin, Lerner and Miranda (2014) document that private equity buyouts lead to greater job loss at establishments operated by target firms. Ouimet and Zarutskie (2016) show that some firms pursue M&A in order to efficiently increasing the workforce. Other works move one step further to investigate the role of labor unions in takeovers. These works rely on the US experience and include Rosett (1990), Becker (1995), Li (2012), and Tian and Wang (2016). Rosett (1990) and Becker (1995) show that takeovers result in the redistribution of rents held by unionized labor to shareholders. Li (2012) analyzes the role of labor unions in protecting workers' interests in takeovers. He finds that targets in more unionized industries experience worse wage and employment outcomes after takeovers. Exploiting union election results, Tian and Wang (2016) find that unionization has a negative impact on firm's takeover exposure and merger gains.

Recent studies focus on employment protection legislations and M&A activity. Empirical evidence is also mixed. John et al. (2015) find that acquirers from US states that have passed the right-to-work statutes experience lower announcement returns. However, they report that the volume of acquisition activity is *not* significantly different between weak labor rights and strong labor rights states. Alimov (2015) shows that countries with tighter employment regulations correlate with higher levels of *cross-border* merger activity. In contrast, Dessaint et al. (2015) show reductions in takeover activity and synergies after the passage of major employment legislation reforms that increase employment protection in 21 OECD countries over the period 1985-2007. In this paper, we complement their work along two main dimensions. First, we confirm that the reduced takeover

activity in response to tighter employment legislations continues to hold using a sample covering a larger set of countries. Their sample comprises about 70% of deals that took place in the UK or US. Both countries are very different from the average country in our sample of 46 countries in the 1992-2010 interval. Second, we concentrate our analysis on employment protection afforded by collective bargaining and show that the negative effect of employment legislations is largely offset by the positive effect of collective bargaining. To the best of our knowledge, this is the first comprehensive study providing worldwide evidence on the effects of collective bargaining on overall M&A activity.

This paper also builds on the literature on cross-country determinants of M&A activity. Using a sample of 49 countries, Rossi and Volpin (2004) find that better investor protection is associated with high rate of successful M&A deals, more attempted hostile takeovers and fewer cross-border deals. They also report that takeover premiums are higher in countries with better investor protection. In an industry-level analysis, like ours, Bris, Brisley and Cabolis (2008) examine the effects of cross-border mergers that are associated by differences in investor protection. They find that the Tobin's *Q* of an industry is positively related to the percentage of the market capitalization in the industry that is acquired by firms coming from countries that are more protective. Bris, Cabolis and Janowski (2010) and Lel and Miller (2015) document that countries adopting takeover and anti-trust laws experience an increase in aggregate M&A activity. Ahern, Daminelli and Fracassi (2015) highlight the role of national culture in merger decisions around the world. Our paper adds to this literature by identifying a significant effect of collective bargaining on M&A activity within industries in a large cross-section of countries over two decades.

The rest of the paper proceeds as follows. Section 2 discusses the various channels through which employment protection affects takeover activity and, in this way, lays out the hypotheses to be tested. Section 3 describes the data and provides preliminary results. Section 4 contains regression results. Section 5 presents concluding remarks.

2. Hypotheses Development

We propose two competing testable hypotheses for the link between employment protection and takeover activity. First, the pursuit of efficiency is commonly presumed to be an important motive of takeover decisions.[14] In particular, acquiring firms create efficiency gains by correcting existing inefficiencies such as redundant employment and excessive wages. Employees as a group may thus resist takeover when they face employment uncertainty, giving rise to conflicts of interest between target employees and shareholders. Employees' ability to resist is a function of their bargaining power, being either determined by collective bargaining or by laws. There are several plausible reasons that employees' bargaining power deters takeovers. Collective bargaining protections give employees mechanisms to partake in firm decisions, limiting acquirers' ability to renegotiate the employment contracts that they have incentive to breach. Some deal announcements are also subject to labor unions' approval and involve negotiations about concessions on wages and employment contract terms.[15] The legal framework governing individual and collective dismissals further influences the costs incurred by acquirers in restructuring the workforce. These reasons are supported by numerous studies that show employment protection and, in particular, labor unions destroy firm value in the long run (see, most notably, Lee and Mas, 2012). Another reason is related to the role of employees for integrating the two firms following the takeover. Efficient integration process usually goes hand-in-hand with an increase of employees' investment in post-takeover firm-specific human capital (see John et al., 2015, for a discussion). The willingness and engagement of employees in providing their time, skills and knowledge are, indeed, crucial to ensure a successful integration between the two firms.[16] Thus, by bearing the cost of effort and firm-specific human capital investment, employees' interests may diverge with the ones of shareholders in the M&A context, threatening efficient integration process and deal performance. Taken together, employees' bargaining power may be treated as heavy hurdle to potential acquirers, reducing target firms'

[14] See pioneering works of Gort (1969), Jensen (1993), and Mitchell and Mulherin (1996).
[15] Relatedly, organized labor can take collective actions, such as strikes and lockouts, to oppose a takeover bid or be very effective in mobilizing media and politicians to block the deal and thereby retain their jobs (see Hellwig, 2000).
[16] For example, employees must learn new production and information technologies or get new job responsibilities resulting from the combination of the two firms.

attractiveness and in turn slowing down overall M&A activity. We therefore propose the following hypothesis.

Hypothesis 1: There is a negative relation between the national level of employment protection and M&A activity.

Second, an alternative hypothesis generates the opposite empirical prediction, that is, the degree of employment protection increases takeover activity. When employment protection is tighter, managers are more likely to collude with employees when strong managerial incentives are absent. Pagano and Volpin (2005) argue that managers may offer higher wage premiums in return for employees' support to avert hostile takeovers, decreasing firm value. Cronqvist, Heyman, Nilsson, Svaleryd and Vlachos (2009) show that entrenched managers pay their employees more. However, a change in ownership can break collusive agreements between managers and employees. Stronger managerial incentives following takeovers and mergers may lead to greater gains originated from rents held by target employees, and such gains will be greater when bargaining with (unionized) employees is tougher. In other words, greater employee rents, associated with tighter employment protection, are seen as important sources of post-takeover gains accruing to target shareholders, in turn enhancing aggregate takeover activity. Consistent with this idea, Rosett (1990) and Becker (1995) find wealth concessions by unions in takeovers. Li (2012) shows that unions worsen wage and employment outcomes after transfers of ownership. This is further consistent with Shleifer and Summers (1988) who propose a view of takeovers as breaching existing contracts, either explicit or implicit, between incumbent managers and firm stakeholders; Garvey and Gaston (1997) formalize this view. The authors argue that acquirers renege on existing contracts and expropriate rents from target firm stakeholders. Anticipating this breach of contract, target shareholders demand higher prices from the acquirers, and thus the post-acquisition transfers show up as (part of) the takeover premiums. The victims of such redistributions are, among firm stakeholders, mostly employees. Thus, we have the following alternative hypothesis.

Hypothesis 2: There is a positive relation between the national level of employment protection and M&A activity.

Conceptually, the discussion above applies to the national level of *employment protection*. However, different institutions govern employment protection at the national level with potentially different effects on M&A. Collective bargaining and employment legislations are the two key institutions. As discussed in the introduction, the latter defines employees' de jure bargaining power, while the former reflects employees' actual bargaining power in a particular country. Our analysis accounts for this institutional difference. More specifically, we assess whether the effects on M&A activity played by both institutions are complementary, substitute or simply opposite.

In addition, collective bargaining at industry level between individual labor unions and employer associations is a central arena for setting wage and employment conditions in some countries, which may cast some doubts on the importance of collective bargaining at the national level that we investigate. We address this possibility by including interacted industry and year fixed effects to control for industry-level dynamics.

3. Sample, Variables Definitions and Preliminaries

3.1. Sample Composition and Data Sources

Our sample of transactions is obtained from the Securities Data Corporation's (SDC) Mergers and Acquisitions database for 46 countries covered by the Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts' (ICTWSS) database over the period 1992-2010. Our sample period starts in 1992 because it is the first year when the data quality in the SDC database became reliable.[17] We include all completed deals (domestic and cross-border) valued at $1 million or more for which the target is a public firm. We exclude LBOs, spin-offs, exchange offers, recapitalization, share repurchases, tender offers and buyback transactions. We drop self-dealing transactions from our sample for which acquirer and target CUSIPS and announcement dates are identical. For each deal, we obtain information (from SDC) on announcement date, public status of target, transaction value, form of deal, industry classification

[17] See Netter, Stegemoller and Wintoki (2011) for a thorough discussion on the completeness of SDC data. In particular, the authors point out that SDC covers deals of any value, including unreported values, only after 1992 (see also the SDC online help).

and other deal-related variables. The data filters yield a sample of 32,912 M&A deals with an aggregate deal value of $13,645.35 billion across the 46 countries.

Table 1 presents the sample composition. The numbers reported are in line with prior studies, including Rossi and Volpin (2004), Erel, Liao and Weisbach (2012), Ahern et al. (2015) and Lel and Miller (2015), and thus do not warrant detailed discussion. Panel A reports the time distribution of deals. For example, we observe an increase in both the number of M&A deals and transaction values over the years 1997 to 2000, which reflects the M&A wave of the 1990s. We observe another surge in years 2007-2009. Panel B presents the distribution of deals across countries. The top three target countries undertaking large number of deals in our sample are the US (11,409), Japan (3,503) and Canada (2,779). Consistent with Rossi and Volpin (2004), Common law countries represent the bulk of M&A activity. Panel C presents the breakdown of the number of deals per industry-year. We classify industry using the Fama-French (FF) definitions of 12 industry portfolio (see Fama and French, 1997). The number of deals per industry is relatively stable over the sample period. The financial services industry counts the highest number of deals, with a total of 7,117 deals over the sample period. A boom in this industry is also observed in 1998 with 490 deals. The industry called "Other" which includes, among others, mines, construction, hotels and entertainment is the second biggest industry in terms of number of deals.

The data on firm/industry characteristics are obtained from Center for Research in Security Prices (CRSP) for the US and from Worldscope for the other 45 countries. We use all listed firms available in each year across all the countries. The daily security prices data are obtained from CRSP and Compustat Global databases. For country and country-pair characteristics, we collect data from various data sources. All variables definitions and sources are summarized in Table A1.

3.2. Measuring Takeover Activity

Our indicators of takeover activity measure the frequency and volume of M&A, which respectively capture the dynamics and size of takeover activity. We construct our variables at the industry level using the 12-FF industries. A more detailed industry classification (like the 48-FF industries) would inflate the number of zeros due to the low takeover activity in many industries of some

countries. Closely following Rossi and Volpin (2004) and Bris et al. (2008), our indicators of M&A activity are defined as follows.

The frequency of M&A is calculated as the number of M&A transactions per industry-country-year scaled by the number of listed firm per industry-country-year. More formally,

$$Frequency\ of\ M\&A_{jkt} = \frac{Number\ of\ M\&A\ transactions_{jkt}}{Number\ of\ listed\ firms_{jkt}},$$

where j, k and t are industry, target country and year, respectively. Scaling the number of M&A transactions by the number of listed firms allows us to capture the relative intensity of M&A activity *across* and *within* industries-countries.

The volume of M&A is calculated as follows:

$$Volume\ of\ M\&A_{jkt} = \frac{Total\ dollar\ transaction\ value\ of M\&A_{jkt}}{Total\ market\ capitalization\ of\ listed\ firms_{jkt}},$$

that is, the dollar value of all M&A of firms from industry j in country k in year t divided by the total stock market capitalization of industry j in country k in year t. Information on the number of listed firms and stock market capitalization for each firm is retrieved from CRSP (for the US) and Worldscope (for the other countries).

3.3. Measuring Takeover Gains

Our measurement of M&A gains of target firms follows Masulis, Wang and Xie's (2007) study, meaning that we compute the cumulative abnormal returns (CAR) relative to announcement date by market model. We calculate a 3-day CAR spreads over (-1,+1) event window in which 0 is the announcement date. The parameter of the market model is estimated by 200-day estimation period spreads over (-236,-36) days from day 0. For robustness purposes, we also calculate target CAR over 7-day and 11-day windows around the deal announcement date and also look at the offer premium. The offer premium is defined as the offer price relative to target market price four weeks prior to deal announcement.

3.4. Measures of Collective Bargaining

We measure two salient features of a country's collective bargaining system which shapes labor power over the firm (see, e.g., Flanagan, 1999; OECD 2004). The two country-level indicators

used are union density and bargaining coverage. We draw our measures from the comprehensive ICTWSS database compiled by Visser (2011) at the Amsterdam Institute for Advanced Labor Studies (AIAS) of the University of Amsterdam, of which most researchers in labor economics refer to.

Union density is net union membership as a proportion of wage and salary earners in employment.[18] It ranges from 0 to 1. Moving from low to high shows increase in union density rate. Next, bargaining coverage is number of employees covered by collective (wage) bargaining agreements as a proportion of all wage and salary earners in employment with the right to bargaining. The index does not include the sectors and occupations that are excluded from right to bargain. It ranges from 0 to 1. Moving from low to high shows increase in coverage by bargaining agreements. While union density represents one measure of potential union bargaining clout, bargaining coverage is a complementary indicator of union presence as it measures the real extent to which salaried workers are subject to union-negotiated terms and conditions of employment. For robustness purposes, we also use additional measures of union density and bargaining coverage reported by the OECD and International Labour Office (ILO).

3.5. Measure of Employment Protection Legislations

To capture the stringency of employment protection legislations, we use the Employment Protection Laws (EPL) index compiled by the OECD. The EPL is a composite index covering various aspects of dismissal protection grouped into three broad categories: (1) the procedural requirements that need to be followed after the decision of firing in case of regular employment contracts; (2) the notice and severance pay requirements; (3) the difficulty of dismissal. This index ranges from 0 to 5. Higher EPL strengthens employees' de jure bargaining power. The use of the EPL index offers an important advantage as it is comparable across and within countries.

3.6. Other Determinants of Takeovers

Since many other factors are likely related to the patterns of collective bargaining, we control for a host of industry-country-level factors and country-level characteristics in our industry-level

[18] This makes the best available approximation because this measure corrects for the number of retired workers, among others; see also Ebbinghaus and Visser (2000).

analysis. For our (deal-level) CAR analysis we further control for other deal-level, firm-level and country-pair characteristics. All control variables employed have been shown by existing research to be associated with the size and dynamics of M&A activity and gains (e.g., Rossi and Volpin, 2004; Billet and Xue, 2007; Masulis et al., 2007; Bris et al., 2008; Erel et al., 2012; Ahern et al., 2015; Lel and Miller, 2015). All the variables used in the analyses are further detailed in Table A1.

First, in our deal-level analysis we include deal size, relative size and target market capitalization variables as well as cash payment, financial acquirer, toehold, friendly deal and same industry dummy variables. Second, we control for firm-level characteristics: total assets, leverage, market-to-book ratio, ROA, dividend per share and competition structure of the industry. Third, we convert all firm-level variables at industry-level by taking the industry median of each variable.[19] The inclusion of these variables isolates the effects of deal, firm and industry characteristics on M&A activity/gains from our measures of collective bargaining. Fourth, we account for various country-level and country-pair characteristics. To capture a country's size and level of economic development, we use GDP and GDP per capita. We also control for recession periods. We add both stock market capitalization and private credit ratios to capture a country's level of financial development. Trade openness is the sum of imports and exports as a share of GDP. We proxy for a country's institutional environment by including time-varying indices taken from the International Country Risk Guide's (ICRG) database and capturing the quality of institutions, state of investment environment and democratic accountability. As exchange rate differences between acquirer and target countries affect M&A gains, we calculate the exchange rate volatility between acquirer and target countries from 36 months up to 1 month relative to the announcement date. Last, we include cross-border and same legal origin dummy variables.

3.7. A First Look at the Data

The descriptive statistics are displayed in Table 2. We only comment on descriptive statistics of collective bargaining variables. The descriptive statistics of the other variables do not warrant further discussions as they are consistent with existing studies. Concerning union density, Table 2

[19] The industry-level analysis also accounts for labor intensity.

reports a mean value of 0.300 and a standard deviation equal to 0.191. Although Table 1 Panel B clearly indicates that union density varies substantially over time (mean and standard deviation for each country are reported), this hides a lot of the information. A closer look at our sample shows the following patterns. Some countries have experienced significant reduction in union density over our sample period. For example, union density rate in Australia, the Netherlands and the UK drops, respectively, by 52.2%, 23.4%, 32.0% between 1992 and 2010. This contrasts with other countries, like Finland, Iceland and Sweden, where union density shows several periods of significant increase over the same period. Cross-country variation is also substantial (see Table 1 Panel B). For example, France, Spain and the US have very low union density rates (lower than 20%). The Scandinavian countries have very high rates (all above 50%, some around 80%). The pattern is not necessarily similar for bargaining coverage. Table 2 reports a mean value of 0.557 and a standard deviation equal to 0.284. Bargaining coverage is on average much higher than union density and much more stable over the period. While high union density leads to high coverage of bargaining agreements, the converse is not true. As an example, France and Spain have very low union density, yet bargaining coverage is above 80%.[20] Note also that the correlation (untabulated) between union density and bargaining coverage is 0.572.

We now turn to discussing initial assessments on the relation between collective bargaining and M&A activity. In Table 3 Panel A, we compare our M&A indicators for industry-country-year observations for which collective bargaining is above and below the sample median. The frequency of M&A and volume of M&A are 0.022 and 0.012 higher in countries where union density is above the median than those below the median, respectively. Similar insights apply for bargaining coverage. Surprisingly, the differences in means on CARs and premium are negative. In countries with an above median union density (or bargaining coverage) target CARs and offer premium are smaller. Systematic differences between the US and the average country in our sample may explain the different result. Indeed, Panel B reveals that the US drives this very result. If we drop the US, differences become positive. For example, CAR (-1,+1) is 0.103 (resp. 0.106) higher in countries where union density (resp. bargaining coverage) is above the median relative

[20] The bulk of the variance between union density and bargaining coverage is explained by mandatory extensions of collective agreements to non-unionized sectors as well as the share of employers belonging to employer associations that negotiate collective contracts (see OECD, 2014, for further details).

to countries below the median. Overall, the differences in means reported in Table 3 suggest that the extent of collective bargaining is positively associated with M&A activity and the gains it creates.

Furthermore, Figure 1 (resp. Figure 2) exhibits a positive association between union density (resp. bargaining coverage) and the volume of M&A averaged for each country in our sample period. In contrast, Figure 3 exhibits a negative association between the average EPL index compiled by the OECD and the average volume of M&A.[21] Of course, all sorts of omitted variables may explain these correlations. Still, they suggest that rigidities in labor markets take many forms with different effects on M&A activity, of which the regression analyses to follow aim at assessing.

4. Regression Results

4.1. Collective Bargaining and Takeover Activity

We begin our analysis by examining the effect of collective bargaining on the frequency and volume of M&A. Using industry-level data, we estimate the following specification:

$$1. \quad y_{jkt} = \alpha_j + \alpha_k + \alpha_t + \beta \cdot Labor_{kt} + \gamma \cdot X_{jkt} + \varepsilon_{jkt}, \tag{1}$$

where j denotes an industry, k a country and t a year. The dependent variable, y_{jkt}, is either the frequency of M&A or volume of M&A. α_j, α_k and α_t are industry, country, and year fixed effects, respectively. $Labor_{kt}$ is one of the two measures of collective bargaining (i.e., union density and bargaining coverage). X_{jkt} is a vector of control variables and ε_{jkt} the error term. The vector of control variables takes into account industry-country-level factors (total assets, leverage, market-to-book ratio, ROA, dividend per share, labor intensity, and competition) as well as country-level characteristics (GDP, GDP per capita, recession, stock market capitalization, private credit, trade openness, institutional quality, investment profile, and democratic accountability). In all cases,

[21] When we reproduce Figures 1-3 with respect to all our M&A measures, we can see similar patterns. Moreover, the correlation between the EPL index and union density (resp. bargaining coverage) is 0.078 (resp. 0.423).

standard errors are adjusted for heteroskedasticity and clustered in two ways, by industry-country and by year since we are collapsing the data at these levels.

Tables 4 and 5 report the coefficients of Ordinary Least Squares (OLS) regression models derived from specification (1).[22] Table 4 focuses on the frequency of M&A (i.e., the dynamics of the takeover market), while Table 5 repeats the analysis with the volume of M&A (i.e., the size of the market). In column (1) of Table 4, we do not include any control variables, but the fixed effects. The coefficient of interest (β in specification (1) above) is positive and significant at the 1% level. In column (2), we add to the previous specification industry-country-level and country-level control variables. The results are unchanged: β is positive and significant at the 1% level. In column (3), besides controlling for the all usual determinants of the frequency of M&A, we have industry-year fixed effects ($\alpha_j \times \alpha_t$) to account for industry-level dynamics and country fixed effects to account for time-invariant country-specific characteristics. In column (4), we estimate the same specification as in column (3) but we replace country fixed effects by industry-country fixed effects ($\alpha_j \times \alpha_k$), which allow for differences across countries within the same industry.

Across columns (1)-(4), the coefficient of union density is positive, always statistically significant at the 1% level, and has a similar magnitude. These positive effects have large economic consequences. For the average industry, a one standard deviation increase in countries' union density leads to an increase of 7.2% in the frequency of M&A (using results from column (4)). Our specifications contain a large number of control variables, capturing effects that are known to influence M&A activity, for which estimated coefficients show the expected sign in most regression models.

In columns (5)-(8), we mirror the specifications in columns (1)-(4) for bargaining coverage as an independent variable of interest. The results are in line with those presented so far. Throughout our specifications, increases in bargaining coverage at the country level are associated with increases in the frequency of M&A at the industry level. The economic effect is sizable. Using the

[22] We estimate all specifications using linear models as the large number of fixed effects introduced could affect the estimates in Tobit regression models (see Greene, 2004). For robustness purposes, we re-estimate all specifications using Tobit regression models to account for the truncation of observed M&A activity at zero. Table A2 in Appendix displays the results, which are very similar.

results of column (8), the frequency of M&A of an industry increases by 10.7% as bargaining coverage increases by a one standard deviation.[23]

Turning to the volume of M&A, columns (1)-(4) of Table 5 report the coefficients on union density, while columns (5)-(8) report the coefficients on bargaining coverage. We find that the coefficients, either on union density or bargaining coverage, are positive and statistically significant at the 5% level in seven out of eight specifications. The magnitude of the effects is also economically meaningful. Using the results of column (4) (resp. (8)), the volume of M&A increases by 1.7% (resp. 2.6%) in response to an increase of union density (resp. bargaining coverage) by one standard deviation.

It is also worthwhile emphasizing that all the results on M&A activity presented here are obtained using as dependent variable, either the frequency of M&A or the volume of M&A, which are respectively scaled by the number of all listed firms per industry-year in a target country and the stock market capitalization of all listed firms in an industry-country-year. The advantage of such scaling is that it allows industry comparisons across and within countries. However, such scaling may disproportionately weight countries with relatively small M&A markets, in turn affecting statistical inference. Table A2 in the Appendix shows consistent results when we employ unscaled dependent variables; that is, the logarithm of the number of deals by industry-country and the logarithm of the dollar volume of deals by industry-country.[24]

Collectively, these results, supporting Hypothesis 2, strongly characterize collective bargaining as being a key driver of M&A activity at the industry level in developed economies. We now turn to address the role of employment protection legislations.

4.2. The Role of Employment Protection Legislations

As the national level of employment protection results from various combinations of collective bargaining and employment protection legislations, it is important to examine their respective role

[23] These tabulated results show regression specifications considering union density and bargaining coverage separately to avoid multicollinearity problems arising from the strong correlations between the two variables. For robustness purposes in section 4.3, we include in the same specification union density and bargaining coverage.

[24] These results are also robust to the time period. The results, unreported, are qualitatively similar if we restrict our sample to the 1990s, the 2000s, or even the pre-2008 crisis period. The global financial crisis is, indeed, a severe structural shock for both collective bargaining systems and takeover markets.

and interaction on takeover activity. To capture the stringency of employment protection legislations, we use the EPL index.[25] The results are displayed in Table 6. The dependent variable in all regressions is the frequency of M&A.[26] Odd-numbered columns take a specification similar to (1) with the further addition of EPL to test the relative importance of each labor market institution. Even-numbered columns condition the effect of collective bargaining on the frequency of M&A on EPL as our proxy for employment legislations; in this way, we test the extent to which collective bargaining complements or substitutes employment legislations.

In column (1), the coefficient obtained on EPL appears negative and significant at the 10% level, supporting Hypothesis 1 and confirming evidence from other studies (e.g., Dessaint et al., 2015). Controlling for EPL does not reduce the explanatory power of union density on the frequency of M&A, consistent with Hypothesis 2. In column (2), we augment the previous specification with the interaction term. Union density continues to play a direct and positive effect on the dynamics of M&A activity at the industry level around the world, contrasting again with a direct and negative effect for EPL. The coefficients obtained indicate that union density produces an impact on takeover activity higher than EPL by a factor of 1.5 (using the estimates in column (2)), suggesting that collective bargaining fully offsets the effect of legal protections. Also from column (2), the interaction term (*Union Density x EPL*) appears positive and significant and its estimate is greater than the estimate on union density itself. This implies that the effect of union density is reinforced in countries with tighter laws protecting employees. Columns (3)-(4) repeat these tests with bargaining coverage. It confirms the conclusions drawn for union density and EPL, except that the interaction term turns out to be insignificant. Overall, these findings show that the both institutions have opposite effects, with collective bargaining mitigating to a large extent the effect of employment legislations.

[25] In further analyses we use two (time-invariant) indices borrowed from Botero, Djankov, La Porta, Lopez-de-Silanes and Shleifer (2004). One of these indices, called employment laws index, measures the difficulty and the costs of reducing wages and working hours, and covers regulations concerning overtime and use of temporary contracts. The other index, called collective relations laws index, assesses the legal protection of labor unions and the regulation of collective disputes. The results, unreported, are very similar to those presented with the EPL index.
[26] The results are robust to employing volume of M&A as dependent variable.

4.3. Sensitivity Tests

Table 7 presents a number of sensitivity tests on the frequency of M&A.[27] Panel A reports the estimates from a country-level analysis. Columns (1) and (2) report the coefficients on union density, while columns (3)-(4) show the coefficients on bargaining coverage.[28] Across the specifications we can see that collective bargaining is positively associated with the frequency of M&A at the country level. The coefficients on union density and bargaining coverage are positive and always significant at conventional levels. In terms of economic size, the estimate in column (2) suggests that when a country experiences an increase of its union density rate by one standard deviation the frequency of countrywide M&A activity increases by 7.9%. For bargaining coverage, a one standard deviation increase implies a 12.5% increase in the dynamics of M&A activity at the country level (using the estimate in column (4)).

We also conduct a variety of other analyses to determine whether the patterns (at the industry level) we document are robust. Our regression specifications thus far considered union density and bargaining coverage separately to avoid multicollinearity problems arising from the strong correlations between the two variables. In Panel B column (1), we include in the same specification union density and bargaining coverage. This yields similar results with coefficients on both measures of collective bargaining still positive and significant. Then, we test the sensitivity of our results to the use of other measures of union density and collective bargaining retrieved from different sources. In column (2) we use the OECD measure of union density, while in columns (3) and (4) we use the ILO measures of union density and bargaining coverage, respectively. Our results are very robust to the use of alternative data sources.

Further analyses include: dropping UK and US (Panel C columns (1) and (6)); dropping Scandinavian countries (Panel C columns (2) and (7)); splitting the sample between OECD and non-OECD countries (Panel C columns (3), (4), (8) and (9)); and excluding targets in financial

[27] Unreported results, available upon request, show that the results of this section are robust to employing volume of M&A as dependent variable.

[28] For this test, we cluster standard errors at the dimensions of the panel, which in this case amounts to double clustering by country and year.

services industry (Panel C columns (5) and (10)). In all cases, the results are very similar to those shown in Table 4.

Furthermore, our results continue to hold when we impose different sample selection criteria to compute our dependent variables. These alternative sample selection criteria are the following: selecting only transfers of stakes above 10% (Panel D columns (1) and (5)); focusing on transactions that represents an explicit change of control, meaning that the acquirer purchases 50% or more of the target's shares in the transaction and owns less than 50% of the target prior to the transaction (Panel D columns (2) and (6)); limiting only to transfers of stakes of 100% (Panel D columns (3) and (7)); and expanding the selection to failed deals (Panel D columns (4) and (8)).

4.4. Identifying the Economic Channel

4.4.1. Cross-Sectional Heterogeneity

Our evidence is consistent with the hypothesis that collective bargaining spurs M&A activity. In this section, we analyze underlying mechanisms through which this occurs. In section 2, we argue that greater gains can be sourced from cost-cutting in countries with high prevalence of collective bargaining. If our results are attributable to this channel, we should expect to observe a greater positive association in labor-intensive industries, that is, industries in which labor is a more important input of production. To test this conjecture, we estimate

$$y_{jkt} = \alpha_j + \alpha_k + \alpha_t + \beta_1 \cdot Labor_{kt} + \beta_2 \cdot I_{jkt} + \beta_3 \cdot (Labor_{kt} \times I_{jkt}) + \gamma \cdot X_{jkt} + \varepsilon_{jkt}. \quad (2)$$

Here I_{jkt} is a measure of labor intensity for industry j in year t for a country k, while β_3 is the coefficient of interest. (See Table A1 for variables definitions.) All the other variables and subscripts are defined as before. Standard errors are double-clustered by industry-country and year.

Table 8 presents the results for labor intensity, in which the dependent variable is the frequency of M&A. For the sake of exposition, we do not report the results for which the volume of M&A is the dependent variable since they are very similar. We proxy labor intensity with the industry median of the number of employees. In column (1), besides the usual determinants of M&A activity, we control for industry, country and year fixed effects. In this specification we see that

union density is positively associated with the frequency of M&A only to the extent that target firms operate in labor-intensive industries. In fact, the direct effect of union density (β_1 in specification (2)) is positive but insignificant, while the interaction between union density and labor intensity (β_3) is positive and significant. In column (2), we estimate specification (2) by including country fixed effects and industry-year fixed effects to control for industry dynamics. The coefficient β_3 on the interaction remains positive and significant. The estimate of β_3 is once again positive and significant in column (3), in which we estimate the same specification as in column (2) with the further addition of the interacted industry and country fixed effects. In column (4), we repeat the same specification as in column (2) by dropping UK and US. Our results are unaltered. In specifications in columns (5)-(8) we interact labor intensity with bargaining coverage using the same combinations of fixed effects. In these specifications, we also see that bargaining coverage is positively associated with the frequency of M&A only in labor-intensive industries. These results indicate that the incidence of M&A increases significantly more in industries in which there are more opportunities to restructure the labor force. This analysis suggests that cost-cutting objectives might serve as an underlying mechanism through which collective bargaining increases the size and dynamics of M&A activity.

4.4.2. Wealth Transfers: Direction and Magnitude

Another way to gauge the cost-cutting channel is to look at the gains accruing to shareholders in target firms. In section 2, we argue that a large part of the takeover premium comes from rent expropriation from firm stakeholders, in particular employees (Shleifer and Summers, 1988). Collective bargaining is generally viewed as a rent-seeking institution that successfully capture quasi-rents—such as higher wage and benefit premiums, higher staffing levels and a host of subtle constraints on management discretion and flexibility in its control of the workforce—that could have otherwise flowed to shareholders in the form of higher profits. In this section, we test (at the deal level) whether the shareholder gains from takeovers come at the expense of labor.

For that purpose, we perform OLS regressions of the following specification:

$$CAR_{it} = \alpha_j + \alpha_k + \alpha_t + \beta \cdot Labor_{kt} + \gamma \cdot X_{ikt} + \varepsilon_{it}. \quad (3)$$

Here CAR_{it} is, for deal i,[29] the target's 3-day CAR (-1,+1) surrounding the acquisition announcement date, α_j, α_k and α_t are fixed effects for industry, country and year, $Labor_{kt}$ is one of the two measures of collective bargaining, X_{ikt} is a vector of control variables and ε_{it} the error term. To isolate the relationship between CAR and differences in countries' collective bargaining, we control for a host of deal-level, target firm-level, country-level and country-pair characteristics (X_{ikt}) that past researchers have shown help explain target announcement returns. These control variables are discussed in Section 3 and are more completely defined in Table A1. Standard errors are double-clustered by country and year.

Three comments are in order regarding this test. First, it is worth noting that the target CAR component largely reflects the premium paid by the acquirer (see Schwert, 2000). We also employ the offer premium in robustness. Second, from specification (3), we expect that β is greater than zero, indicating higher gains for target shareholders in countries with tighter collective bargaining protections. If equation (3) is correctly specified, then β is an unbiased estimate of the additional gains when the target firm is in a "labor-friendly" country. Third, this test does not provide direct evidence on the source of the wealth transfers; however, it indicates both the magnitude and direction of wealth shift from employees to target shareholders.

Table 9 presents the results.[30] In column (1), we only include deal-level and firm-level control variables with the fixed effects. The coefficient of interest (β in specification (3) above) is positive and significant at the 5% level. In column (2), we add to the previous specification country-level and country-pair determinants of CAR. β is positive and significant at the 5% level. In column (3), we estimate the same specification as in column (2) but we further account for firm-level determinants (i.e., total assets, leverage, market-to-book ratio, ROA, dividend per share and competition). The inclusion of the additional firm-level determinants in column (3) dramatically reduces the number of observations, but does not overturn the finding.

[29] We focus on deals representing an explicit change of control. Table A3 (Panel B) reports qualitatively similar results if we opt for other criteria in selecting deals.

[30] Due to data restrictions on some variables the following countries are removed from the CAR analysis: Brazil, Bulgaria, Estonia, Iceland, Latvia, Lithuania, Malta and Slovakia.

Across columns (1)-(3), the coefficient of union density is positive and always statistically significant at conventional levels, suggesting that collective bargaining positively impact on target firm CARs. These effects are economically meaningful. Increasing union density by one standard deviation leads from 51.9% to 64.2% increase from the average target return of 19.5%. In dollar terms, this implies a range of value creation for average-size target firms of $96.4 to $119.1 million. For median-size target firms, the increase is $13.1 to $16.1 million.

Columns (4)-(6) repeat the analysis for bargaining coverage as an independent variable of interest. The results are in line with those linking union density and target CAR. Across the specifications, the coefficient on bargaining coverage is positive and significant at conventional levels. The economic significance is considerable as a one standard deviation increase in bargaining coverage implies a 35.4% to 42.2% increase from the average target return of 19.5%. In dollar terms, the increase ranges from $65.7 to $78.4 million for average-size target firms and from $8.9 to $10.6 million for median-size target firms.

We test the robustness of these results in the following ways. First, we alternatively measure target abnormal announcement returns over event days (-3,+3) and (-5,+5). Second, we use various other criteria in selecting transactions. Third, we sequentially exclude from our sample targets in the US or the UK, in Scandinavian countries, in non-OECD countries, and in financial services industry. Fourth, we employ a measure of the offer premium as dependent variable. In all cases, we find that our main results on the direction and magnitude of wealth transfers hold. For the sake of exposition, these robustness checks are relegated to the Appendix (see Table A3 Panels A-D).

The findings in this section are entirely consistent with the cost-cutting channel and provide clear indications on both magnitude and direction of wealth transfers going from employees to shareholders in target firms. However, these findings offer little insights into the *source* of these wealth transfers. In theory it could take the form of lower employment levels as well as lower wages and benefits. In the next section we provide insights into the source of such transfers.

4.4.3. Workforce Restructuring as a Source of Wealth Transfers

Since labor accounts for a large share of the costs in many firms, changes in employment associated with takeovers might explain a significant fraction of the takeover premium. A natural

extension of our previous analysis is to assess the effect of collective bargaining on post-takeover layoffs, a potentially important source of wealth transfers. Our prediction is indeed that collective bargaining is associated with higher levels of workforce restructuring following takeovers. In this analysis we are, however, limited to the use of a fraction of our sample for which firm-level employment data are available. Also, we can only observe changes in employee headcount at the combined firm relative to the acquirer and the target before the deal. After a deal, layoffs should mostly occur at the target rather than the acquiring firm. Thus, the caveat, important to have in mind when analyzing the results, is that the former typically represents a smaller part of the combined firm, while the latter may also count a number of hiring and firing.

We first estimate the effect of takeovers on employment outcomes, and then examine how collective bargaining interacts in this association. To do so, we construct a panel at the deal-year level. All deals are followed over a five-year window around their completion, which allows to identify the dynamics of the total number of employees at the acquirer and target firms in the years surrounding the deal. The specification is the following:

$$y_{it} = \alpha_i + \alpha_t + \beta_1 \cdot Post\ Takeover_{it} + \beta_2 \cdot Labor_{kt} + \beta_3 \cdot (Post\ Takeover_{it} \times Labor_{kt}) + \gamma \cdot X_{kt} + \varepsilon_{it}, \quad (4)$$

where y_{it} is the log-number of employees of the acquirer and the target in year $t+x$, where t is the year of completion of the deal i, and $+x$ ($-x$) is the number of years after (before) the takeover. α_i and α_t are fixed effects for deal and year, $Post\ Takeover_{it}$ is a dummy variable equal to one for the years after and equal to zero for the years prior to the takeover, $Labor_{kt}$ is one of our measures of collective bargaining, X_{kt} is a vector of country-level controls and ε_{it} the error term. As with above tests, we cluster standard errors by country and year.

Table 10 reports the estimation results. In column (1), we show the baseline estimate of the effect of takeovers on employment (*Post Takeover*), controlling for country-level determinants of takeovers as well as deal and year fixed effects. The coefficient of interest (β_1 in specification (4)) is negative and significant at the 1% level, meaning that, on average, following takeovers, employment at the combined firm decreases. In economic terms, post-takeover employment is reduced by 8.8% relative to the employment at the acquirer and the target prior to the deal.

Reassuringly, this estimate is very in line with other studies (e.g., Davis et al. 2014; Dessaint et al., 2015). In column (2), we estimate the interaction with union density (*Post Takeover x Union Density*). The effect of takeover on employment (β_1 in specification (4)) is still negative and significant. As predicted, the interaction term (β_3) is negative and significant, while the coefficient on union density (β_2) become insignificant albeit negative. The negative sign on the interaction term implies that the adverse effect of takeover on employment is further pronounced in countries where unions have stronger bargaining clout. In column (3), we evaluate the effect of bargaining coverage on workforce restructuring in post-takeover years and find a similar result. We show that there is a negative and significant reduction in the combined firm employment following takeovers, which is amplified in countries with high coverage of bargaining coordination. Again, the effects reported are large, with the estimate on the interaction term greater than the estimate on *Post Takeover* itself.

These results indicate that after takeovers combined firms in countries with higher prevalence of collective bargaining actually experience significantly larger job reductions. Although these results on the source of wealth transfers are partial (wage cuts, pension termination might also account for a significant part of these transfers[31]), the economic effect is large and suggests that workforce restructuring represents a primary source of wealth redistribution between target employees and shareholders. With this analysis we offer further support in favor of the cost-cutting channel interpretation for the effects on M&A activity that we documented above.

4.5. Alternative Explanations

In this section, we deal with potential alternative explanations through which collective bargaining could operate. Table 11 reports the results. As before, we use the frequency of M&A as dependent variable, but we obtain similar results with the volume of M&A. First, the legal protections of minority shareholders against expropriation by firm insiders prove to be important determinants of M&A activity around the world (Rossi and Volpin, 2004). We evaluate the role of legal protections of minority shareholders, which also allows testing whether part of the significant results for collective bargaining is driven by confounding effects with investor protection. We

[31] See, for example, Rosett (1990), Pontiff, Shleifer and Weisbach (1990), Ippolito and James (1992), and Petersen (1992).

proxy for the strength of legal protections of minority shareholders using measures compiled by Djankov, La Porta, Lopez-de-Silanes and Shleifer (2008) and Spamann (2010), namely the anti-self-dealing index and the corrected anti-director rights index. Both indices measure minority shareholder protection against controlling shareholders' actions that would hurt shareholder interests.

In columns (1) to (4), we run the regression specification (1) including the full set of control variables and fixed effects in addition to one of the indices of investor protection. We exclude country fixed effects as time-invariant indices of investor protection would become encompassed. Across specifications, the coefficients on both indices of investor protection together with the coefficients on both measures of collective bargaining are positive and significant at conventional levels in almost all cases. This indicates that a more active market for corporate control is the outcome of stronger investor protection, consistent with prior research. Importantly, collective bargaining exerts a positive role, independent from investor protection, on the frequency of M&A.

Second, innovation is another channel through which collective bargaining may positively impact on M&A activity. Manso (2011) argues that tolerance for failure is critical for motivating innovation. As innovation activities have high probability of failure, collective bargaining protections can provide firms a commitment device to not punish employees for short-run failures and, thereby, can appear to have positive ex ante effect on innovation. In other words, collective bargaining, by pushing wages upward and providing greater job security, encourages employees to increase their investment in skills and to pursue value-increasing innovation activities. Innovative firms tend accordingly to flourish in countries with greater collective bargaining. Acharya, Baghai and Subramanian (2013, 2014) show that employment protection spurs the extent of innovation in an economy, particularly in R&D-intensive industries, by enhancing employees' innovative efforts. Countries with greater collective bargaining increase target firms' attractiveness by creating a comparative edge in innovation-intensive industries, which fosters M&A industry activity. Alimov (2015) shows that firms in OECD countries with stringent labor market

regulations are more likely to be acquired by foreign acquirers if the firm is in a sector with high productivity and skill.[32]

We thus investigate the differential effect of collective bargaining on the frequency of M&A across industries that differ in terms of R&D intensity. In columns (5) and (6), we run regression specification (2) by considering innovation intensity instead of labor intensity. We proxy innovation intensity with the industry median of R&D expenditures scaled by total book assets. The results reveal that the direct effect of collective bargaining, captured either through union density or bargaining coverage, is positive and significant at the 5% level, but not so for the interaction term. In fact, the interaction between union density (resp. bargaining coverage) and R&D intensity is negative and insignificant. This suggests that the industry effects of M&A activity caused by collective bargaining do not go through the innovation channel.

Finally, the observed positive relationship in this study could be driven by a business cycle effect. For example, it may be that unionization increases during booms as those are times when firms have higher cash holdings. Klasa, Maxwell and Ortiz-Molina (2009) show that unions bargain harder when firms are flushed with cash, and this may result in higher union density rates. At the same time, takeover waves are possibly driven by industry shocks and this depends on whether there is sufficient overall capital liquidity (Harford, 2005). This is more likely to be true during expansions.

To rule out this alternative explanation, in all our analyses we have controlled for recession periods occurring in countries of our sample. Now, we examine the differential effect of collective bargaining on takeover activity across business cycles. Our results in columns (7) and (8) show that this phenomenon is not affecting our posited causal relationship. As expected, recessions negatively and significantly impact on M&A activity. Union density and bargaining coverage still have a direct and significant effect on takeovers, while the interaction term is, quite surprisingly, also positive and significant. This means that collective bargaining exerts a more accentuated positive effect on M&A activity in recession periods. We rationalize this result as follows. In

[32] Guadalupe, Kuzmina and Thomas (2012) analyze the likelihood of being a target by a foreign acquirer using a sample of Spanish firms. The authors find that foreign firms cherry pick the most productive firms within industries. They further find that following the acquisition, these firms are more likely to innovate.

expansion periods when there is sufficient capital liquidity in the market, acquirers can better achieve revenue enhancements. Alternatively, in recession periods, targets with operational inefficiencies represent a comparative advantage for acquirers to achieve greater gains. The stronger positive effect of collective bargaining identified during recession periods supports the notion that in the absence of substantial revenue enhancement opportunities in those periods, acquirers choose their targets with high potential of cost-cutting; that is, precisely in countries where bargaining with unions is tougher.

The alternative arguments addressed in this section do not explain our main result; this increases our confidence in support of Hypothesis 2 that collective bargaining does enhance takeover activity around the world.

5. Conclusion

This paper investigates the role of collective bargaining on the pattern of M&A activity. Similar to Kanbur and Ronconi (2016), we argue that the focus on legal protections of employees, rather than on *actual* coordination through collective bargaining, may be misleading because institutionally distinct countries can and do achieve the same functional outcome through different means. In this attempt, this paper helps reconcile prior findings by illuminating one key channel of labor influence: collective bargaining. In a comprehensive sample of domestic and cross-border M&A from 46 countries over 1992-2010, we identify evidence that a country's collective bargaining system has a significant and economically meaningful impact on the size and dynamics of M&A activity. Controlling for industry-country and industry-year fixed effects as well as a multitude of industry-country characteristics including competition, growth prospects and profitability and countries' institutional quality, we find clear evidence of a positive relationship between union density and bargaining coverage and the frequency and volume of M&A at both industry and country levels.

Moreover, we find that the positive effect of unionization and coverage by bargaining coordination on the pattern of M&A activity is more pronounced for industries in which labor is more important input of production. We further show greater wealth transfers from employees to target

shareholders in countries with higher prevalence of collective bargaining. Workforce restructuring is a major source of wealth transfers. These findings appear consistent with the view that rigidities in the labor market generate gain opportunities sourced from the reappropriation (by shareholders) of employee rents.

This paper is part of a growing field of research at the intersections between labor economics and corporate governance. Although our findings offer new insights on this issue, it does suffer from potential limitations. International comparisons have the advantage of showing a broad picture and identifying the crucial role played by countries' institutional arrangements. This also constitutes the main drawback. Indeed, for the sake of comparability and data availability, we are constrained by the use of country-level proxies and by the focus only on target firms that are publicly traded. This may affect our ability to capture all the variation at the plant-level or at specific characteristics of employment contracts. Delving into such matters requires a considerable effort to match firm-level data on financial and balance sheet variables with contract-level or plant-level data on employment, wages and labor relations. The effort of joining such disparate datasets may partly explain why so far efforts in this direction have been limited, but this constitutes assuredly fruitful avenues for research.

This paper has also implications for the ongoing (policy and research) debates on the functioning and real effects of corporate governance mechanisms, and takeover markets in particular. Indeed, it supports that corporate governance problems become more acute when one takes into account the role played by labor market institutions or by firm constituencies with different horizons, interests and opportunities. This paper suggests that policy efforts that aim at improving corporate governance could benefit from taking into account the specificities of unionized firms and from designing sensible policies with respect to the specificities of a country's labor market institutions. From an academic standpoint, this paper suggests that researchers who want to study the functioning and real effects of takeover markets could benefit from interacting their proxies with indicators of both collective bargaining and employment legislations. To give an example, initial findings suggest that employment levels fall in years following a takeover (see, e.g., Bhagat, Shleifer and Vishny, 1990). Similar to ours, the work by Li (2012) investigates in turn how labor

unions interact in this relationship. Exploiting variations in US states with right-to-work laws (i.e., where labor unions face a less favorable bargaining environment), he finds, contrary to the conventional wisdom, that target firms in unionized industries experience relatively higher levels of wage and employment reductions. In another corporate governance context, Atanassov and Kim (2009) find that the stringency of employment legislations is less effective in preventing employee layoffs when financial leverage is high. While this research drive takes an important path, more research is needed to better understand how governance mechanisms work in "labor-friendly" industries/countries and, thereby, affect social welfare.

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Figure 1. Union Density and Volume of M&A

The figure shows the total M&A dollar transaction values divided by total GDP relative to union density. These figures are averaged by country in our sample over the period 1992-2010.

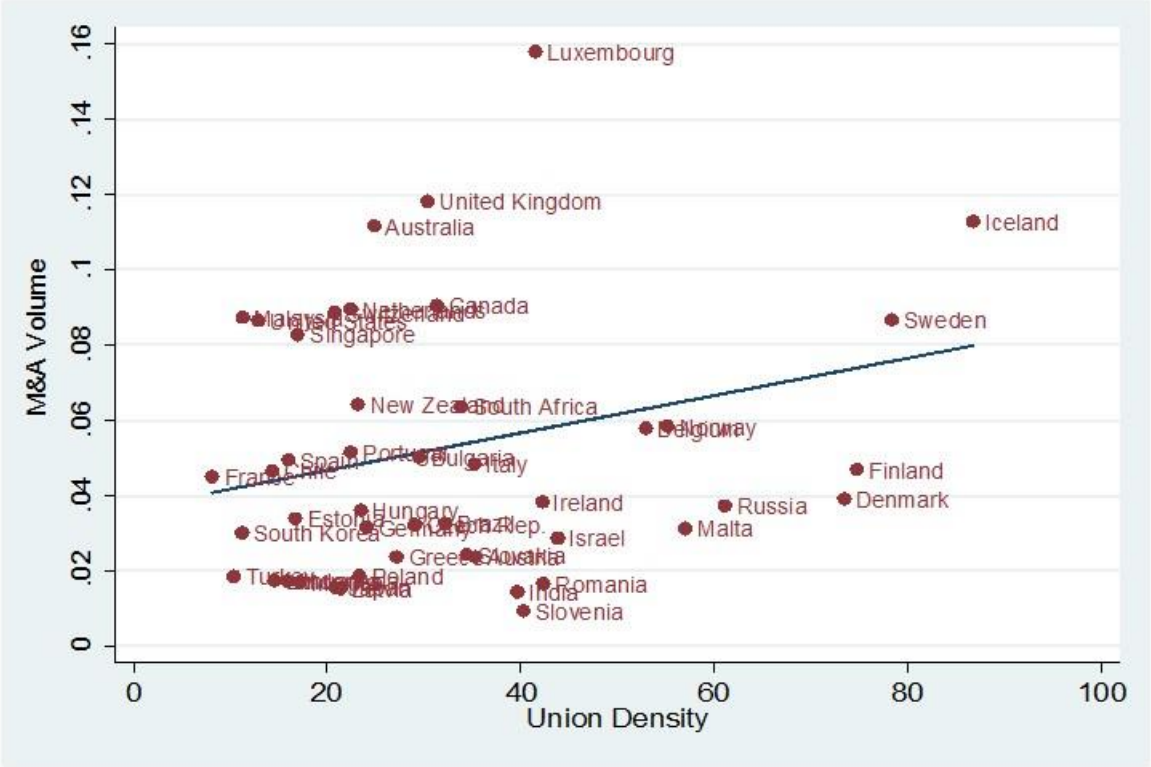

Figure 2. Bargaining Coverage and Volume of M&A
The figure shows the total M&A dollar transaction values divided by total GDP relative to bargaining coverage. These figures are averaged by country in our sample over the period 1992-2010.

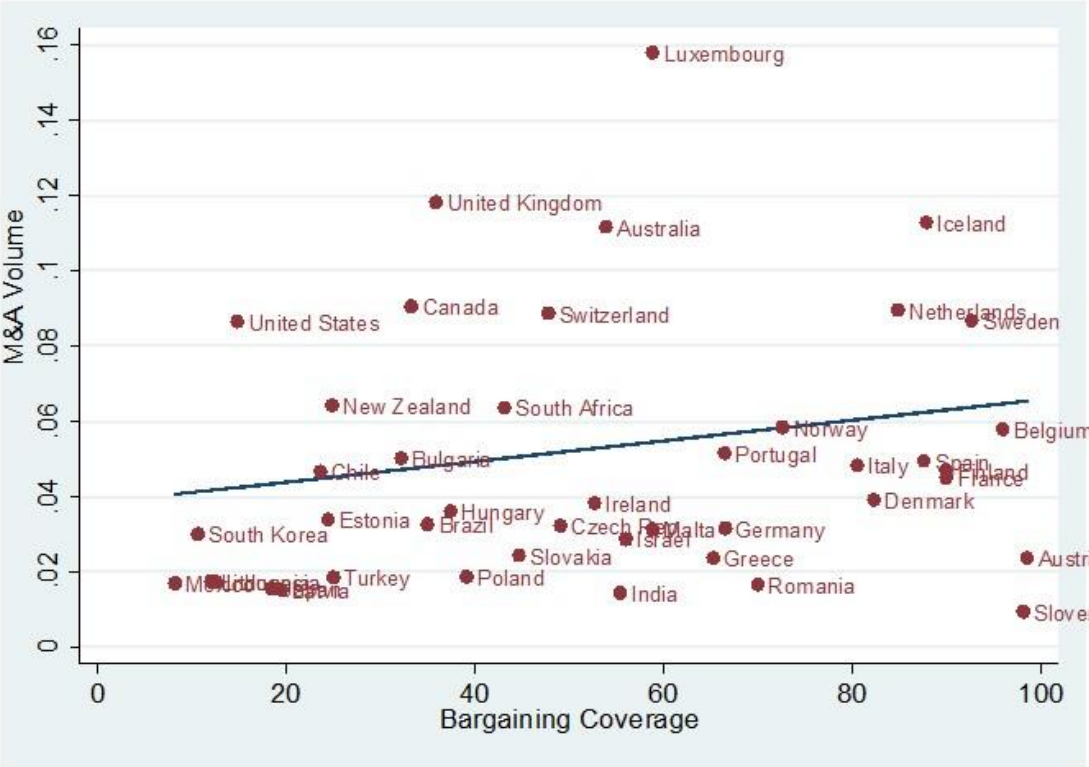

Figure 3. EPL and Volume of M&A
The figure shows the total M&A dollar transaction values divided by total GDP relative to the EPL index. These figures are averaged by country in our sample over the period 1992-2010.

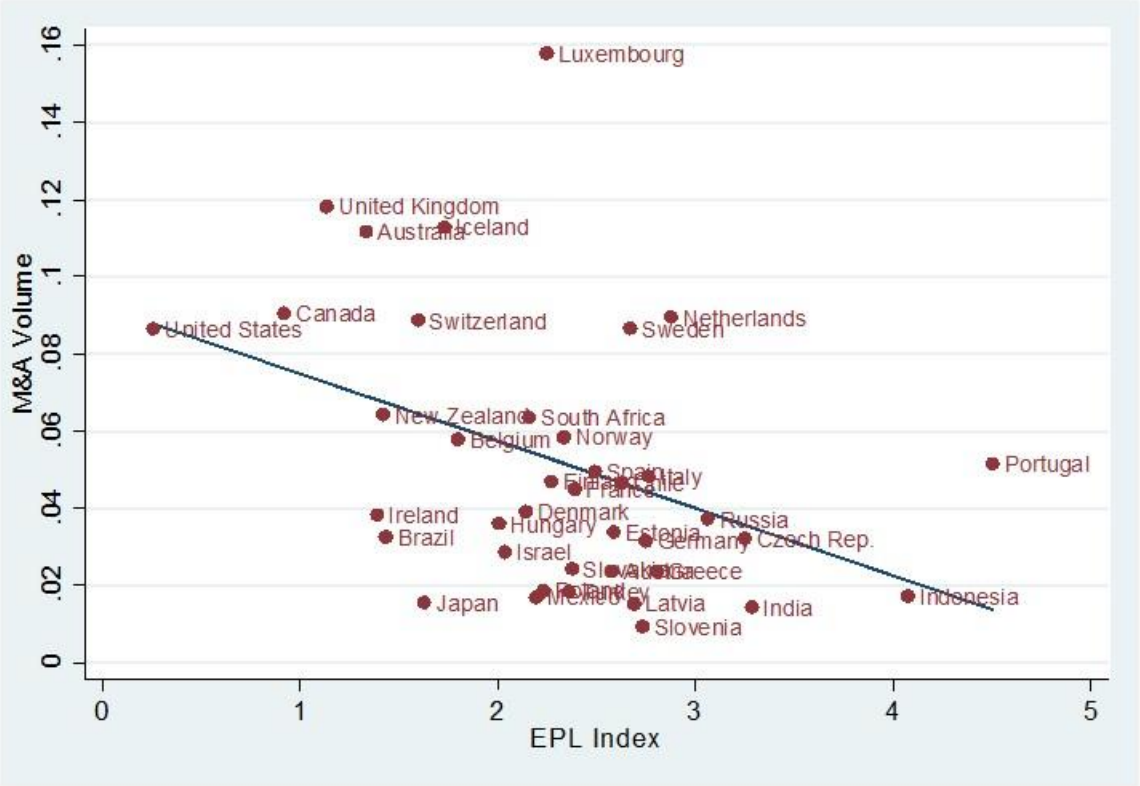

Table 1. Sample Composition

The table presents the M&A sample composition. Panel A describes the M&A sample by year. Panel B describes the M&A sample by country. Panel C describes the M&A sample by industry-year. The last row of Panels A-C reports the total number of M&A transactions, while the last row of Panel A and B also reports the total dollar value of M&A transactions in the sample. In Panel C: "NoDur" means non-durable consumer goods (food, tobacco, textiles, apparel, leather, toys); "Durbl" means durable consumer goods (cars, TVs, furniture, household appliances); "Manuf" means manufacturing (machinery, trucks, planes, off. furn., paper, com. printing); "Enrgy" means oil, gas and coal extraction and products; "Chems" means chemicals and allied products; "BusEq" means business equipment (computers, software and electronic equipment); "Telcm" means telephone and television transmission; "Utils" means utilities; "Shops" means wholesale, retail and some services (laundries, repair shops); "Hlth" means healthcare, medical equipment and drugs; "Money" means financial services; "Other" includes mines, constr., bld. mt., trans., hotels, bus. serv., entertainment. All variables are defined in Table A1.

Panel A - By Year

Year	Total Number of Deals			Total Volume of Deals [in $ billion]		
	Number	Percentage	Cumulative Percentage	Total Value	Percentage	Cumulative Percentage
1992	841	0.03	0.03	89.07	0.01	0.01
1993	1106	0.03	0.06	159.52	0.01	0.02
1994	1412	0.04	0.10	126.95	0.01	0.03
1995	1633	0.05	0.15	398.88	0.03	0.06
1996	1980	0.06	0.21	474.87	0.03	0.09
1997	1749	0.05	0.26	576.96	0.04	0.13
1998	2040	0.06	0.33	1028.65	0.08	0.21
1999	2296	0.07	0.40	1732.93	0.13	0.34
2000	2158	0.07	0.46	1224.98	0.09	0.43
2001	1594	0.05	0.51	670.12	0.05	0.48
2002	1373	0.04	0.55	377.09	0.03	0.50
2003	1393	0.04	0.59	439.77	0.03	0.53
2004	1411	0.04	0.64	722.30	0.05	0.59
2005	1613	0.05	0.69	917.42	0.07	0.66
2006	1926	0.06	0.75	1440.87	0.11	0.76
2007	2351	0.07	0.82	1176.15	0.09	0.85
2008	2060	0.06	0.88	990.22	0.07	0.92
2009	2100	0.06	0.94	523.44	0.04	0.96
2010	1876	0.06	1.00	575.18	0.04	1.00
All Years	32912			13645.35		

Panel B - By Country

Country	Total Number of Deals	Total Volume of Deals [in $ billion]	Frequency of M&A	Volume of M&A	CAR (-1,+1)	Union Density		Bargaining Coverage	
						Mean	Std Dev	Mean	Std Dev
Australia	2418	358.46	0.11	0.04	0.12	0.27	0.07	0.58	0.16
Austria	62	21.07	0.05	0.02	0.06	0.37	0.06	0.98	0.00
Belgium	149	80.78	0.06	0.01	0.17	0.53	0.02	0.96	0.00
Brazil	394	152.86	0.31	0.11	-	0.34	0.06	0.35	0.00
Bulgaria	10	1.28	0.00	0.01	-	0.33	0.17	0.32	0.04
Canada	2779	662.40	0.08	0.04	0.16	0.32	0.02	0.34	0.03
Chile	126	25.38	0.03	0.01	0.06	0.15	0.02	0.24	0.00
Czech Republic	31	10.47	0.03	0.03	0.04	0.29	0.13	0.49	0.08
Denmark	103	41.47	0.02	0.02	0.14	0.74	0.03	0.83	0.02
Estonia	15	0.45	0.05	0.03	0.14	0.18	0.15	0.24	0.04
Finland	152	36.03	0.10	0.03	0.19	0.75	0.04	0.89	0.05
France	1221	602.29	0.07	0.03	0.04	0.08	0.01	0.90	0.00
Germany	574	580.33	0.04	0.02	0.12	0.25	0.05	0.67	0.04
Greece	106	41.76	0.02	0.01	0.05	0.28	0.04	0.66	0.01
Hungary	25	0.70	0.04	0.01	0.11	0.27	0.17	0.37	0.04
Iceland	17	3.02	0.04	0.01	-	0.87	0.04	0.90	0.03
India	922	74.14	0.13	0.01	0.05	0.40	0.01	0.51	0.16
Indonesia	237	34.74	0.03	0.02	0.05	0.16	0.11	0.13	0.02
Ireland	68	10.67	0.06	0.02	0.08	0.44	0.08	0.54	0.06
Israel	202	27.52	0.12	0.02	0.04	0.48	0.15	0.56	0.00
Italy	522	390.47	0.10	0.04	0.06	0.36	0.02	0.81	0.01
Japan	3503	674.00	0.05	0.01	0.08	0.22	0.03	0.19	0.02
Latvia	5	0.03	0.00	0.01	-	0.21	0.04	0.20	0.03
Lithuania	24	0.46	0.04	0.03	-	0.15	0.07	0.12	0.02
Luxembourg	17	7.99	0.02	0.01	0.02	0.42	0.03	0.59	0.01
Malaysia	574	61.72	0.05	0.02	0.05	0.12	0.02	-	-
Malta	4	0.20	0.01	0.00	-	0.60	0.05	0.62	0.05
Mexico	114	90.07	0.05	0.02	0.08	0.18	0.03	0.08	0.01
Netherlands	188	165.80	0.07	0.02	0.20	0.23	0.02	0.85	0.02
New Zealand	336	21.41	0.17	0.05	0.08	0.26	0.08	0.29	0.15
Norway	434	90.33	0.09	0.04	0.13	0.56	0.02	0.72	0.01
Poland	204	24.46	0.09	0.03	0.02	0.24	0.06	0.39	0.02
Portugal	139	27.47	0.09	0.02	0.03	0.23	0.03	0.68	0.13
Romania	20	2.25	0.02	0.02	-0.10	0.47	0.16	0.70	0.00
Russia	230	180.37	0.07	0.04	-0.12	0.64	0.17	-	-
Singapore	614	67.45	0.07	0.02	0.12	0.17	0.02	-	-
Slovakia	2	0.01	0.00	0.00	0.03	0.34	0.16	0.44	0.04
Slovenia	4	0.10	0.00	0.01	0.00	0.43	0.10	0.98	0.03
South Africa	411	95.21	0.04	0.02	0.09	0.34	0.07	0.43	0.01
South Korea	1030	114.39	0.05	0.02	0.03	0.12	0.02	0.11	0.00
Spain	474	268.14	0.14	0.03	0.06	0.16	0.01	0.87	0.03
Sweden	444	131.87	0.10	0.04	0.16	0.79	0.06	0.92	0.02
Switzerland	157	174.50	0.02	0.01	0.09	0.21	0.03	0.48	0.00
Turkey	76	40.77	0.03	0.01	0.04	0.12	0.05	0.25	0.00
United Kingdom	2366	1269.15	0.08	0.03	0.16	0.32	0.04	0.38	0.06
United States	11409	6980.91	0.08	0.03	0.18	0.13	0.01	0.15	0.02
All Countries	32912	13645.35	-	-	-	-	-	-	-

Panel C - By Industry-Year

Year	NoDur	Durbl	Manuf	Enrgy	Chems	BusEq	Telcm	Utils	Shops	Hlth	Money	Other	All Years
1992	85	25	94	31	15	71	32	25	59	60	226	118	841
1993	94	32	94	56	19	107	51	29	85	75	313	151	1106
1994	120	27	136	83	18	149	63	26	120	95	379	196	1412
1995	105	28	172	80	27	159	73	45	132	133	435	244	1633
1996	140	45	188	124	26	181	84	56	181	135	495	325	1980
1997	103	37	194	100	25	171	78	45	146	126	460	264	1749
1998	145	55	212	99	34	239	120	59	153	108	490	326	2040
1999	162	61	256	68	31	363	144	77	171	111	469	383	2296
2000	153	65	228	93	42	349	136	48	164	91	458	331	2158
2001	132	50	153	87	23	269	79	27	114	70	336	254	1594
2002	100	37	149	57	17	207	60	27	135	70	276	238	1373
2003	97	33	121	57	43	218	46	19	126	74	282	277	1393
2004	111	37	135	49	16	200	74	19	126	68	299	277	1411
2005	130	40	114	88	27	246	70	26	172	83	305	312	1613
2006	150	45	179	85	31	288	69	35	160	121	359	404	1926
2007	159	51	229	129	46	329	79	80	200	125	444	480	2351
2008	105	38	180	122	33	340	55	43	131	127	410	476	2060
2009	135	51	162	136	38	377	62	17	141	105	375	501	2100
2010	122	43	184	111	25	284	47	36	119	122	306	477	1876
All Industries	2348	800	3180	1655	536	4547	1422	739	2635	1899	7117	6034	32912

Table 2. Descriptive Statistics
The table presents the descriptive statistics of dependent variables, variables of interest, and deal-level, firm-level, industry-country-level, country-level and country-pair characteristics for the full sample which covers 46 countries over the period 1992-2010. All variables are defined in Table A1.

Variable Name	Mean	Standard Deviation	25th pctl.	Median	75th pctl.	Number of Observations
Dependent Variables						
Frequency of M&A	0.074	0.210	0.000	0.000	0.077	6488
Volume of M&A	0.025	0.082	0.000	0.000	0.010	6488
CAR (-1,+1)	0.195	0.265	0.039	0.146	0.289	6246
CAR (-3,+3)	0.210	0.280	0.046	0.163	0.315	5351
CAR (-5,+5)	0.214	0.287	0.046	0.168	0.326	4646
Offer Premium	0.380	0.423	0.137	0.314	0.544	5898
Employment Protection						
Union Density	0.300	0.191	0.167	0.246	0.362	6488
Bargaining Coverage	0.559	0.284	0.329	0.560	0.835	5566
EPL	2.151	0.761	1.595	2.246	2.679	5170
Deal- and Firm-Level Characteristics						
Deal Size	5.257	1.853	3.928	5.16	6.519	6246
Relative Deal Size	1.463	0.759	1.089	1.348	1.687	6246
Target Market Capitalization ($ million)	951.933	4512.023	40.049	129.079	498.578	6246
Target Market Capitalization (log)	5.014	1.806	3.715	4.868	6.214	6246
Cash Payment	0.511	0.500	0.000	1.000	1.000	6246
Financial Acquirer	0.128	0.334	0.000	0.000	0.000	6246
Toehold	0.160	0.367	0.000	0.000	0.000	6246
Friendly Deal	0.954	0.210	1.000	1.000	1.000	6246
Same Industry	0.547	0.498	0.000	1.000	1.000	6246
Industry-Country-Level Characteristics						
Total Assets	12.325	1.543	11.268	12.139	13.231	6488
Leverage	0.295	0.431	0.023	0.234	0.492	6488
Market-to-Book	0.017	0.017	0.010	0.014	0.020	6488
ROA	0.025	0.082	0.012	0.031	0.051	6488
Dividend Per Share	0.523	1.049	0.000	0.049	0.470	6488
Labor Intensity	6.845	1.380	6.097	6.831	7.689	6488
Herfindahl	0.299	0.266	0.096	0.208	0.418	6488
R&D Intensity	0.057	0.162	0.004	0.013	0.038	4239
Country-Level Characteristics						
GDP	26.620	1.334	25.669	26.444	27.506	6488
GDP Per Capita	9.765	0.952	9.219	10.063	10.466	6488
Recession	0.157	0.364	0.000	0.000	0.000	6488
Stock Market Capitalization	0.789	0.606	0.336	0.620	1.090	6488
Private Credit	0.956	0.502	0.565	0.928	1.234	6488
Trade Openness	0.891	0.699	0.531	0.680	0.974	6488
Investment Profile	9.634	2.217	7.833	10.333	11.500	6488
Quality of Institutions	12.445	2.825	10.167	13.000	15.000	6488
Democratic Accountability	5.409	0.961	5.000	6.000	6.000	6488
Anti-Self-Dealing	0.503	0.239	0.300	0.460	0.650	6400
Spamann	4.137	0.896	4.000	4.000	5.000	5554
Country-Pair Characteristics						
Exchange Rate Volatility	0.009	0.03	0.000	0.000	0.000	6246
Same Legal Origin	0.928	0.259	1.000	1.000	1.000	6246
Cross-Border	0.152	0.359	0.000	0.000	0.000	6246

Table 3. Tests of Differences

The table presents tests of differences in means. Panel A displays the results for the full sample, while Panel B excludes the US. The statistical significance of the difference in mean, for each dependent variable, between high (above median) and low (below median) value of Union Density and Bargaining Coverage are indicated by *, ** and *** for 10%, 5%, and 1% level of significance, respectively. *t*-statistics are in parentheses. All variables are defined in Table A1.

	Union Density				**Bargaining Coverage**			
	High	**Low**	**Difference (High-Low)**	**t-stat**	**High**	**Low**	**Difference (High-Low)**	**t-stat**
Panel A - Full Sample								
Frequency of M&A	0.087	0.065	***0.022	(4.32)	0.084	0.064	***0.0202	(3.96)
Volume of M&A	0.032	0.020	***0.012	(5.67)	0.028	0.023	*0.005	(2.54)
CAR (-1,+1)	0.157	0.236	***-0.079	(11.97)	0.153	0.242	***-0.088	(13.37)
CAR (-3,+3)	0.172	0.250	***-0.078	(10.36)	0.169	0.256	***-0.086	(11.44)
CAR (-5,+5)	0.180	0.254	***-0.074	(8.88)	0.177	0.259	***-0.082	(9.88)
Offer Premium	0.342	0.421	***-0.079	(7.27)	0.337	0.429	***-0.092	(8.39)
Panel B - Excluding the US								
Frequency of M&A	0.087	0.064	***0.022	(4.30)	0.084	0.064	***0.021	(3.96)
Volume of M&A	0.032	0.020	***0.012	(5.83)	0.028	0.022	**0.006	(2.72)
CAR (-1,+1)	0.156	0.054	***0.103	(6.20)	0.153	0.047	***0.106	(4.01)
CAR (-3,+3)	0.172	0.065	***0.107	(5.36)	0.169	0.037	***0.132	(4.20)
CAR (-5,+5)	0.179	0.070	***0.109	(4.80)	0.177	0.042	***0.135	(3.78)
Offer Premium	0.342	0.185	***0.157	(4.12)	0.337	0.208	0.129	(1.79)

Table 4. Frequency of M&A

The table presents the estimates from OLS models explaining the frequency of M&A. The dependent variable is Frequency of M&A. The variables of interest are Union Density and Bargaining Coverage. Depending on specifications, the regressions control for industry-country-level and country-level characteristics. Inclusion of fixed effects (FE) is indicated at the end. All variables are defined in Table A1. Standard errors are adjusted for heteroskedasticity and double-clustered by industry-country and year. *t*-statistics are in parentheses. Significance at 10%, 5%, and 1% is indicated by *, **, and ***, respectively.

	1	2	3	4	5	6	7	8
Collective Bargaining								
Union Density	***0.353	***0.389	***0.392	***0.376				
	(3.00)	(3.12)	(3.05)	(2.77)				
Bargaining Coverage					***0.336	***0.348	**0.353	**0.375
					(2.82)	(2.61)	(2.56)	(2.57)
Industry-Country-Level Characteristics								
Total Assets		0.010	0.009	-0.001		0.006	0.007	-0.01
		(1.21)	(1.13)	(0.14)		(0.73)	(0.74)	(0.90)
Leverage		-0.012	-0.009	0.002		-0.003	0.000	0.013
		(0.95)	(0.67)	(0.15)		(0.27)	(0.01)	(0.79)
Market-to-Book		0.024	-0.200	0.073		-0.192	-0.391	-0.116
		(0.07)	(0.51)	(0.19)		(0.62)	(1.23)	(0.41)
ROA		-0.107	-0.101	-0.066		-0.189	-0.195	-0.179
		(1.23)	(1.06)	(0.71)		(1.32)	(1.24)	(1.10)
Dividend Per Share		*-0.007	-0.005	-0.008		*-0.006	-0.005	-0.002
		(1.82)	(1.51)	(1.25)		(1.82)	(1.51)	(0.34)
Labor Intensity		-0.004	-0.004	-0.002		0.000	0.000	0.004
		(0.53)	(0.49)	(0.23)		(0.02)	(0.05)	(0.34)
Herfindahl		**-0.041	**-0.036	0.003		**-0.048	*-0.041	-0.035
		(2.45)	(2.03)	(0.11)		(2.17)	(1.80)	(0.70)
Country-Level Characteristics								
GDP		-0.085	-0.110	-0.081		0.276	0.268	0.286
		(0.70)	(0.91)	(0.68)		(1.25)	(1.20)	(1.27)
GDP Per Capita		0.059	0.091	0.075		-0.336	-0.322	-0.333
		(0.46)	(0.70)	(0.58)		(1.47)	(1.40)	(1.42)
Recession		*-0.025	*-0.025	-0.020		*-0.027	*-0.026	-0.024
		(1.85)	(1.83)	(1.47)		(1.81)	(1.75)	(1.63)
Stock Market Capitalization		0.008	0.009	0.006		0.007	0.008	0.004
		(0.96)	(0.99)	(0.56)		(0.46)	(0.50)	(0.25)
Private Credit		0.020	0.019	0.019		0.015	0.013	0.016
		(1.41)	(1.27)	(1.19)		(0.97)	(0.83)	(0.99)
Trade Openness		-0.002	0.000	0.003		**0.065	**0.072	*0.070
		(0.07)	(0.01)	(0.08)		(2.08)	(2.18)	(1.90)

Investment Profile		0.006	0.007	0.007		0.004	0.004	0.003
		(1.26)	(1.30)	(1.33)		(0.73)	(0.75)	(0.64)
Quality of Institutions		0.001	0.000	0.001		-0.002	-0.002	-0.002
		(0.12)	(0.07)	(0.15)		(0.37)	(0.33)	(0.30)
Democratic Accountability		0.005	0.004	0.001		0.008	0.006	0.006
		(0.74)	(0.62)	(0.21)		(0.94)	(0.69)	(0.75)
Year FE	Yes	Yes	-	-	Yes	Yes	-	-
Industry FE	Yes	Yes	-	-	Yes	Yes	-	-
Country FE	Yes	Yes	Yes	-	Yes	Yes	Yes	-
Industry × Year FE	-	-	Yes	Yes	-	-	Yes	Yes
Industry × Country FE	-	-	-	Yes	-	-	-	Yes
Adjusted R^2	0.104	0.110	0.138	0.309	0.092	0.101	0.131	0.315
Number of Observations	6488	6488	6488	6488	5590	5590	5590	5590
Number of Countries	46	46	46	46	43	43	43	43

Table 5. Volume of M&A

The table presents the estimates from OLS models explaining the volume of M&A. The dependent variable is Volume of M&A. The variables of interest are Union Density and Bargaining Coverage. Depending on specifications, the regressions control for industry-country-level and country-level characteristics. Inclusion of fixed effects (FE) is indicated at the end. All variables are defined in Table A1. Standard errors are adjusted for heteroskedasticity and double-clustered by industry-country and year. *t*-statistics are in parentheses. Significance at 10%, 5%, and 1% is indicated by *, **, and ***, respectively.

	1	2	3	4	5	6	7	8
Collective Bargaining								
Union Density	**0.078	**0.080	**0.081	**0.090				
	(2.14)	(2.08)	(2.01)	(2.03)				
Bargaining Coverage					*0.065	**0.082	**0.083	**0.092
					(1.91)	(2.44)	(2.27)	(2.33)
Industry-Country-Level Characteristics								
Total Assets		0.001	0.001	0.003		0.001	0.001	0.000
		(0.47)	(0.42)	(1.04)		(0.55)	(0.56)	(0.05)
Leverage		0.001	0.002	0.007		0.001	0.002	0.007
		(0.25)	(0.41)	(1.40)		(0.37)	(0.46)	(1.34)
Market-to-Book		***-0.201	***-0.250	***-0.236		***-0.176	**-0.218	**-0.205
		(3.43)	(3.21)	(2.99)		(2.78)	(2.58)	(2.25)
ROA		-0.03	-0.029	-0.023		-0.031	-0.037	-0.025
		(1.19)	(1.15)	(1.21)		(1.03)	(1.24)	(0.78)
Dividend Per Share		0.000	0.001	0.000		0.001	0.001	0.002
		(0.27)	(0.53)	(0.19)		(0.83)	(0.73)	(0.92)
Labor Intensity		-0.001	-0.001	-0.002		0.000	-0.001	0.000
		(0.60)	(0.72)	(1.33)		(0.33)	(0.40)	(0.14)
Herfindahl		***-0.020	***-0.020	0.000		***-0.019	**-0.018	-0.004
		(3.28)	(3.12)	(0.04)		(2.80)	(2.52)	(0.34)
Country-Level Characteristics								
GDP		0.026	0.022	0.03		0.067	0.065	0.075
		(0.74)	(0.64)	(0.77)		(1.45)	(1.37)	(1.51)
GDP Per Capita		-0.024	-0.02	-0.027		-0.075	-0.071	-0.083
		(0.63)	(0.52)	(0.64)		(1.51)	(1.43)	(1.51)
Recession		-0.001	-0.001	-0.001		-0.003	-0.003	-0.003
		(0.43)	(0.35)	(0.26)		(1.23)	(1.07)	(0.95)
Stock Market Capitalization		0.001	0.001	0.002		-0.002	-0.002	-0.001
		(0.32)	(0.48)	(0.49)		(0.31)	(0.23)	(0.13)
Private Credit		0.007	0.007	0.006		0.009	0.009	0.009
		(1.39)	(1.36)	(1.04)		(1.49)	(1.45)	(1.35)
Trade Openness		0.001	0.001	0.004		0.014	0.014	0.016
		(0.11)	(0.05)	(0.29)		(0.78)	(0.77)	(0.88)

Investment Profile		-0.001	-0.001	0.000		**-0.003	**-0.003	**-0.003
		(0.48)	(0.49)	(0.14)		(2.44)	(2.42)	(2.14)
Quality of Institutions		0.001	0.001	0.001		0.002	0.002	0.002
		(0.55)	(0.51)	(0.49)		(0.65)	(0.63)	(0.56)
Democratic Accountability		0.001	0.001	0.001		0.003	0.002	0.003
		(0.59)	(0.56)	(0.42)		(1.00)	(0.90)	(0.92)
Year FE	Yes	Yes	-	-	Yes	Yes	-	-
Industry FE	Yes	Yes	-	-	Yes	Yes	-	-
Country FE	Yes	Yes	Yes	-	Yes	Yes	Yes	-
Industry × Year FE	-	-	Yes	Yes	-	-	Yes	Yes
Industry × Country FE	-	-	-	Yes	-	-	-	Yes
Adjusted R^2	0.07	0.08	0.10	0.20	0.06	0.07	0.10	0.20
Number of Observations	6488	6488	6488	6488	5590	5590	5590	5590
Number of Countries	46	46	46	46	43	43	43	43

Table 6. Employment Protection Legislations

The table presents the estimates from OLS models explaining the frequency of M&A. The dependent variable is Frequency of M&A. The variables of interest are Union Density (resp. Bargaining Coverage), EPL and the interaction between EPL and Union Density (resp. Bargaing Coverage). The regressions control for industry-country-level and country-level characteristics. Inclusion of fixed effects (FE) is indicated at the end. All variables are defined in Table A1. Standard errors are adjusted for heteroskedasticity and double-clustered by industry-country and year. *t*-statistics are in parentheses. Significance at 10%, 5%, and 1% is indicated by *, **, and ***, respectively.

	1	2	3	4
Variables of Interest				
Union Density	***0.427	***0.252		
	(3.58)	(2.60)		
Union Density × EPL		**0.337		
		(2.29)		
Bargaining Coverage			**0.199	***0.193
			(2.47)	(2.68)
Bargaining Coverage × EPL				0.291
				(1.60)
EPL	*-0.054	***-0.167	-0.021	*-0.147
	(1.67)	(2.95)	(0.62)	(1.77)
Industry-Country-Level Characteristics	Yes	Yes	Yes	Yes
Country-Level Characteristics	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Adjusted R^2	0.072	0.075	0.071	0.073
Number of Observations	4895	4895	4746	4746
Number of Countries	28	28	28	28

Table 7. Sensitivity Tests

This table presents the estimation results of several sensitivity tests on the frequency of M&A. Panel A presents the country-level results, Panel B presents the results from an "horse race" between Union Density and Bargaining Coverage and results using measures of Union Density and Bargaining Coverage from different sources (i.e., OECD or ILO), Panel C presents the results using various subsamples, and Panel D presents the results for alternative definitions of dependent variables. In all panels the dependent variable is Frequency of M&A, except in Panel A in which Frequency of M&A is aggregated at the country level (i.e., the total number of M&A transaction per country-year divided by the number of listed firms per country-year). The variables of interest are Union Density and Bargaining Coverage. We include the same set of controls as in Table 4 for all models in all panels except in Panel A, in which we only include country-level characteristics. Inclusion of fixed effects (FE) is indicated at the end. All variables are defined in Table A1. Standard errors are adjusted for heteroscedasticity and double-clustered by industry-country and year for industry-level tests, and by country and year for country-level tests. *t*-statistics are in parentheses. Significance at 10%, 5%, and 1% is indicated by *, **, and ***, respectively.

Panel A - Country-Level Tests

	1	2	3	4
Collective Bargaining				
Union Density	**0.439	**0.414		
	(2.09)	(2.01)		
Bargaining Coverage			*0.432	*0.439
			(1.80)	(1.87)
Country-Level Characteristics	-	Yes	-	Yes
Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Adjusted R^2	0.268	0.266	0.272	0.269
Number of Observations	550	550	491	491
Number of Countries	46	46	43	43

Panel B - "Horse Race" and Alternative Data Sources

	1	2	3	4
	Horse Race	OECD Union Density	ILO Union Density	ILO Bargaining Coverage
Collective Bargaining				
Union Density	*0.300	***0.398	***0.190	
	(1.82)	(2.82)	(5.06)	
Bargaining Coverage	**0.286			**0.094
	(2.28)			(2.14)
Industry-Country-Level Characteristics	Yes	Yes	Yes	Yes
Country-Level Characteristics	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Adjusted R^2	0.088	0.064	0.092	0.071
Number of Observations	5566	3506	3732	3044
Number of Countries	43	28	46	42

Panel C - Subsamples

	1	2	3	4	5	6	7	8	9	10
Collective Bargaining										
Union Density	***0.424	***0.348	***0.467	*0.439	***0.362					
	(3.30)	(2.78)	(3.70)	(1.71)	(3.12)					
Bargaining Coverage						***0.378	***0.417	***0.231	*4.319	***0.335
						(2.74)	(3.12)	(3.09)	(1.80)	(2.70)
Industry-Country-Level Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-Level Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
UK & US Drop	Yes	-	-	-	-	Yes	-	-	-	-
Scandinavian Countries Drop	-	Yes	-	-	-	-	Yes	-	-	-
Non-OECD Drop	-	-	Yes	-	-	-	-	Yes	-	-
OECD Drop	-	-	-	Yes	-	-	-	-	Yes	-
Financial Services Drop	-	-	-	-	Yes	-	-	-	-	Yes
Adjusted R^2	0.097	0.105	0.068	0.163	0.095	0.087	0.098	0.067	0.198	0.085
Number of Observations	6131	5939	4900	1616	5890	5232	5040	4750	854	5080
Number of Countries	44	43	28	18	46	41	40	28	15	43

Panel D - Alternative Definitions of Dependent Variables

	1	2	3	4	5	6	7	8
	Stake>10%	Bid for Control	Stake=100%	Including Failed Deals	Stake>10%	Bid for Control	Stake=100%	Including Failed Deals
Collective Bargaining								
Union Density	*0.115	***0.057	***0.053	***0.422				
	(1.94)	(3.38)	(3.05)	(3.02)				
Bargaining Coverage					**0.167	***0.065	**0.052	***0.397
					(2.49)	(3.60)	(2.23)	(2.86)
Industry-Country-Level Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-Level Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.082	0.061	0.082	0.094	0.085	0.063	0.088	0.085
Number of Observations	6488	6488	6488	6488	5590	5590	5590	5590
Number of Countries	46	46	46	46	43	43	43	43

Table 8. Cross-Sectional Heterogeneity - Labor Intensity

The table presents the results from OLS regressions of cross-sectional heterogeneity. The dependent variable is Frequency of M&A. The variable of interest is the interaction of Labor Intensity (i.e., natural logarithm of industry median of the number of employees) with Union Density (resp. Bargaining Coverage). In all models, we include the same set of control variables as in Table 4. Inclusion of fixed effects (FE) is indicated at the end. All variables are defined in Table A1. Standard errors are adjusted for heteroscedasticity and double-clustered by industry-country and year. *t*-statistics are in parentheses. Significance at 10%, 5%, and 1% is indicated by *, **, and ***, respectively.

	1	2	3	4	5	6	7	8
Variables of Interest								
Union Density	0.190	0.191	0.040	0.121				
	(1.31)	(1.27)	(0.22)	(0.78)				
Union Density × Labor Intensity	**0.024	**0.024	**0.043	**0.029				
	(1.98)	(2.05)	(2.07)	(2.16)				
Bargaining Coverage					0.176	0.178	0.134	0.166
					(1.14)	(1.10)	(0.63)	(0.99)
Bargaining Coverage × Labor Intensity					**0.027	**0.028	**0.039	**0.032
					(2.31)	(2.26)	(1.99)	(2.53)
Labor Intensity	-0.013	-0.013	-0.016	-0.014	-0.016	-0.017	-0.02	*-0.021
	(1.44)	(1.42)	(1.34)	(1.51)	(1.53)	(1.55)	(1.12)	(1.75)
Industry-Country-Level Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-Level Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	-	-	-	Yes	-	-	-
Industry FE	Yes	-	-	-	Yes	-	-	-
Country FE	Yes	Yes		Yes	Yes	Yes	-	Yes
Industry × Year FE	-	Yes	Yes	Yes	-	Yes	Yes	Yes
Industry × Country FE	-	-	Yes	-	-	-	Yes	-
UK & US Drop		-	-	Yes	-	-	-	Yes
Adjusted R^2	0.102	0.104	0.237	0.102	0.089	0.088	0.223	0.088
Number of Observations	6488	6488	6488	6107	5590	5590	5590	5232
Number of Countries	46	46	46	44	43	43	43	41

Table 9. Target CAR

The table presents the estimates from OLS models explaining target CAR. The dependent variable is CAR (-1,+1). The variables of interest are Union Density and Bargaining Coverage. Depending on specifications, the regressions control for deal-level, firm-level, country-level and country-pair characteristics. Inclusion of fixed effects (FE) is indicated at the end. All variables are defined in Table A1. Standard errors are adjusted for heteroscedasticity and double-clustered by country and year. *t*-statistics are in parentheses. Significance at 10%, 5%, and 1% is indicated by *, **, and ***, respectively.

	1	2	3	4	5	6
Collective Bargaining						
Union Density	**0.625	**0.530	*0.655			
	(2.40)	(2.02)	(1.86)			
Bargaining Coverage				**0.266	**0.290	*0.243
				(1.98)	(2.18)	(1.75)
Deal- and Firm-Level Characteristics						
Deal Size	0.001	0.002	0.007	0.001	0.001	0.003
	(0.10)	(0.13)	(1.01)	(0.10)	(0.09)	(0.52)
Relative Deal Size	***0.119	***0.118	***0.079	***0.120	***0.120	***0.087
	(7.66)	(7.90)	(6.14)	(8.10)	(8.39)	(9.18)
Target Market Capitalization	-0.012	-0.013	-0.004	-0.012	-0.012	-0.004
	(0.81)	(0.85)	(1.37)	(0.73)	(0.75)	(0.75)
Cash Payment	***0.078	***0.079	***0.040	***0.078	***0.078	***0.037
	(14.55)	(13.53)	(4.99)	(14.36)	(12.96)	(4.63)
Financial Acquirer	***-0.042	***-0.042	**-0.013	***-0.042	***-0.042	**-0.013
	(4.62)	(4.30)	(2.09)	(4.72)	(4.53)	(2.02)
Toehold	***0.032	***0.032	***0.015	***0.033	***0.034	***0.015
	(10.11)	(8.95)	(3.50)	(16.62)	(11.31)	(4.20)
Friendly Deal	0.023	0.023	***0.013	0.023	0.024	*0.013
	(1.26)	(1.17)	(2.66)	(1.15)	(1.14)	(1.82)
Same Industry	0.009	0.009	***0.024	0.009	0.009	***0.026
	(1.18)	(1.20)	(3.31)	(1.16)	(1.16)	(3.23)
Country-Level Characteristics						
GDP		0.024	-0.091		*0.436	-0.217
		(0.09)	(0.32)		(1.68)	(0.79)
GDP Per Capita		0.040	0.131		-0.357	0.293
		(0.14)	(0.39)		(1.33)	(1.13)
Recession		***0.044	-0.012		**0.035	0.003
		(2.67)	(0.71)		(2.31)	(0.21)
Stock Market Capitalization		0.016	0.018		-0.006	*-0.037
		(0.65)	(0.69)		(0.22)	(1.74)
Private Credit		**-0.051	-0.026		***-0.089	-0.017
		(2.00)	(0.84)		(3.01)	(0.36)
Trade Openness		-0.102	*-0.078		-0.035	-0.007
		(1.42)	(1.84)		(0.32)	(0.06)
Investment Profile		***-0.016	-0.002		***-0.019	0.002
		(3.21)	(0.23)		(3.24)	(0.26)
Quality of Institutions		-0.008	***-0.013		-0.004	-0.009
		(0.94)	(2.76)		(0.47)	(0.93)
Democratic Accountability		-0.008	-0.015		0.010	-0.039
		(0.39)	(0.90)		(0.44)	(0.91)
Country-Pair Characteristics						
Exchange Rate Volatility		0.038	**-0.215		0.047	**-0.166
		(0.20)	(2.18)		(0.26)	(2.00)
Same Legal Origin		-0.022	***-0.021		-0.023	-0.013
		(1.14)	(2.66)		(1.19)	(1.61)
Cross-Border		-0.014	0.011		-0.016	0.008
		(0.55)	(1.24)		(0.64)	(0.81)

Additional Firm-Level Characteristics						
Total Assets			-0.005			-0.002
			(1.04)			(0.47)
Leverage			**0.002			0.001
			(1.97)			(1.17)
Market-to-Book			**-0.006			-0.005
			(2.04)			(1.46)
ROA			0.022			0.019
			(0.89)			(0.77)
Dividend Per Share			0.007			0.007
			(1.06)			(1.20)
Herfindahl			0.022			0.040
			(0.36)			(0.50)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.213	0.213	0.192	0.212	0.213	0.199
Number of Observations	6246	6246	2272	6143	6143	2119
Number of Countries	38	38	30	37	37	28

Table 10. Post-Takeover Workforce Restructuring

This table presents estimates of the effect of collective bargaining on the combined number of employees following takeovers. All deals are followed over a five-year window around the completion of the transaction, which allows to identify the dynamics of the total number of employees at the acquirer and the target in the years surrounding the takeover. The dependent variable is the natural logarithm of the number of employees of the acquirer and the target in year $t+x$, where t is the year of completion of the takeover, and $+x$ $(-x)$ is the number of years after (before) the takeover. The variables of interest are Post Takeover, Union Density (resp. Bargaining Coverage), and the interaction between Post Takeover and Union Density (resp. Bargaing Coverage). The regressions control for country-level characteristics. Inclusion of fixed effects (FE) is indicated at the end. All variables are defined in Table A1. Standard errors are adjusted for heteroscedasticity and double-clustered by country and year. *t*-statistics are in parentheses. Significance at 10%, 5%, and 1% is indicated by *, **, and ***, respectively.

	1	2	3
Variables of Interest			
Post Takeover	***-0.088	***-0.054	***-0.083
	(3.15)	(2.70)	(2.79)
Post Takeover × Union Density		*-0.186	
		(1.93)	
Post Takeover × Bargaining Coverage			*-0.088
			(1.81)
Union Density		-0.231	
		(0.64)	
Bargaining Coverage			-0.23
			(0.71)
Country-Level Characteristics	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Deal FE	Yes	Yes	Yes
Adjusted R^2	0.065	0.066	0.054
Number of Observations	26750	26617	25382
Number of Countries	46	46	43

Table 11. Alternative Explanations

The table presents the results from OLS models explaining the frequency of M&A. The dependent variable is Frequency of M&A. Columns (1)-(4) present results from "horse races" between Union Density (resp. Bargaining Coverage) and investor protection indices (i.e., Anti-Self-Dealing and Spamann). Columns (5) and (6) present the results from the differential effect of Union Density (resp. Collective Bargaining) across industries that differ in terms of R&D intensity (i.e., industry median of the ratio of R&D expenditures to total assets). Columns (7) and (8) present the results from the differential effect of Union Density (resp. Collective Bargaining) across recession periods (i.e., years in which GDP growth of a country is negative in two consecutive quarters). In all models, we include the same set of control variables as in Table 4. Inclusion of fixed effects (FE) is indicated at the end. All variables are defined in Table A1. Standard errors are adjusted for heteroscedasticity and double-clustered by industry-country and year. *t*-statistics are in parentheses. Significance at 10%, 5%, and 1% is indicated by *, **, and ***, respectively.

	1	2	3	4	5	6	7	8
		Investor Protection			R&D Intensity		Recession Periods	
Variables of Interest								
Union Density	**0.084		**0.103		**0.441		***0.397	
	(2.47)		(2.48)		(2.45)		(3.11)	
Bargaining Coverage		***0.066		*0.046		**0.310		**0.281
		(2.95)		(1.90)		(2.14)		(2.42)
Anti-Self-Dealing	0.033	**0.056						
	(1.42)	(2.13)						
Spamann			***0.024	*0.013				
			(3.19)	(1.93)				
Union Density × R&D Intensity					-0.103			
					(1.24)			
Bargaining Coverage × R&D Intensity						-0.049		
						(0.83)		
R&D Intensity					0.030	0.031		
					(0.75)	(0.78)		
Union Density × Recession							**0.048	
							(2.11)	
Bargaining Coverage × Recession								*0.058
								(1.85)
Recession	-0.022	*-0.026	-0.025	-0.032	-0.012	-0.009	**-0.039	***-0.053
	(1.49)	(1.79)	(1.33)	(1.54)	(0.80)	(0.51)	(2.38)	(2.84)
Industry-Country-Level Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-Level Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	-	-	-	-	Yes	Yes	Yes	Yes
Adjusted R^2	0.056	0.056	0.066	0.064	0.104	0.102	0.098	0.087
Number of Observations	6400	5502	5554	4760	4239	3796	6488	5590
Number of Countries	43	40	31	29	46	43	46	43

Table A1. Variables Definitions and Sources

Variable Name	Definition and Source
Dependent Variables	
Frequency of M&A	The total number of M&A transactions per industry-year divided by the number of listed firms per industry-year in a target country (*Sources:* SDC and Worldscope).
Volume of M&A	The sum of dollar value of M&A transactions per industry-year divided by total market capitalization of listed firms per industry-year in a target country (*Sources:* SDC and Worldscope).
CAR (-1,+1)	The cumulative abnormal return of target firms calculated over a 3-day window around the announcement date. 5-day and 11-day event windows are also used in robustness. Abnormal returns are calculated using the market model relative to a local equity market index. The value weighted index for US firms is obtained from CRSP, while for other countries local indices (proxies of market portfolio) are retrieved from Worldscope. The parameters of the market model are 200-days estimation period spread over (-236,-36) (*Sources:* CRSP, Compustat Global, and authors' calculations).
Offer Premium	Offer price relative to target market price four weeks prior to M&A announcement (*Source:* SDC).
Employment Protection	
Union Density	Net union memberships divided by all wage and salary earners in employment; it ranges from 0 to 1 and is time-varying (*Source:* ICTWSS).
Bargaining Coverage	Total number of employees covered by collective (wage) bargaining agreements divided by all wage and salary earners in employment with the right to bargaining, adjusted for the possibility that some sectors or occupations are excluded from the right to bargain (removing such groups from the employment count before dividing the number of covered employees over the total number of dependent workers in employment); it ranges from 0 to 1 and is time-varying (*Source:* ICTWSS).
EPL	Index measuring the strictness of regulations that an employer has to follow in order to dismiss a worker with a regular contract; it ranges from 0 to 5 and is time-varying (*Source:* OECD).
Deal- and Firm-Level Characteristics	
Deal Size	The natural logarithm of the dollar value of M&A deal (*Source:* SDC).
Relative Deal Size	The ratio of transaction value to the market capitalization of target firm 4 weeks prior to announcement date (*Source:* SDC).
Target Market Capitalization	The natural logarithm of market capitalization of target firm 4 weeks prior to announcement date (*Source:* SDC).
Cash Payment	Dummy variable equal to 1 if 100% of transaction value is paid in cash, and 0 otherwise (*Source:* SDC).
Financial Acquirer	Dummy variable equal to 1 if acquirer is a financial firm, and 0 otherwise (*Source:* SDC).
Toehold	Dummy variable equal to 1 if acquirer owns non-zero percentage shares in the target firm before the announcement of transaction, and 0 otherwise (*Source:* SDC).
Friendly Deal	Dummy variable equal to 1 if deal attitude is classified as "Friendly" by SDC, and 0 otherwise (*Source:* SDC).
Same Industry	Dummy variable equal to 1 if acquirer and target 2-digit SIC code is the same, and 0 otherwise (*Source:* SDC).
Industry-Country-Level Characteristics	
Total Assets	The industry median of dollar value of the natural logarithm of total assets (*Sources:* CRSP and Worldscope).
Leverage	The industry median of debt-to-equity ratio. It is calculated as long term debt minus cash and cash equivalents divided by book value of common equity (*Sources:* CRSP and Worldscope).
Market-to-Book	The industry median of market-to-book ratio. It is calculated as market value of common equity divided by book value of common equity (*Sources:* CRSP and Worldscope).
ROA	The industry median of return on assets. It is calculated as EBITDA divided by book value of total assets (*Sources:* CRSP and Worldscope).
Dividend Per Share	The industry median of dividend per share (*Sources:* CRSP and Worldscope).

Labor Intensity	The industry median of the natural logarithm of total number of employees (*Sources:* CRSP and Worldscope).
Herfindahl	The sum of squares of market share of individual firm in the same 12-FF industry. Market share is calculated as the dollar value of sales of a firm divided by the total dollar value of sales volume of the industry (Authors' calculation).
R&D Intensity	The industry median of the ratio of total R&D expenditures to total book assets (*Sources:* CRSP and Worldscope).
Country-Level Characteristics	
GDP	The natural logarithm of Gross Domestic product (GDP) (*Source:* World Bank).
GDP Per Capita	Per capita GDP in US dollars (*Source:* World Bank).
Recession	Dummy variable equal to 1 if GDP growth is negative in two consecutive quarters within year for a country (*Source:* OECD)
Stock Market Capitalization	The ratio of total market capitalization of listed companies to GDP (*Source:* World Bank).
Private Credit	The ratio of private credit provided to private sector to GDP (*Source:* World Bank).
Trade Openness	The ratio of imports and exports of goods and services to GDP (*Source:* World Bank).
Investment Profile	Time-varying index measuring the government's attitude to inward investment. The investment profile is determined by summing the three following components: (1) risk of expropriation or contract viability; (2) payment delays; and (3) repatriation of profits. Each component is scored on a scale from 0 (very high risk) to 4 (very low risk) (*Source:* ICRG).
Quality of Institutions	Time-varying index measuring institutional quality of a country, which is calculated by summing the three following components: (1) corruption; (2) law and order; and (3) bureaucratic quality. High score indicates countries with higher institutional quality and vice versa (*Source:* ICRG).
Democratic Accountability	Time-varying index measuring government's responsiveness to its people. The less responsive government will fall peacefully in democratic society and possibly violently in non-democratic society. High score indicates higher democratic accountability and vice versa (*Source:* ICRG).
Anti-Self-Dealing	Time-invariant index measuring the amount of disclosure before and after the transaction has occurred, the need for approval by disinterested shareholders, and litigation governing a specific self-dealing transaction. High score indicates better protection of minority shareholders and vice versa (*Source:* Djankov et al., 2008).
Spamann	Corrected version of the anti-director rights index of Djankov et al. (2008), formed by adding 1: when (1) the country allows shareholders to mail their proxy vote; (2) shareholders are not required to deposit their shares prior to the general shareholders' meeting; (3) cumulative voting or proportional representation of minorities on the board of directors is allowed; (4) an oppressed minorities mechanism is in place; (5) the minimum percentage of share capital required that gives right a shareholder to call for an extraordinary shareholders' meeting is less than or equal to 10% (the sample median); or (6) shareholders have preemptive rights that can only be waived by a shareholders' meeting. This index ranges from 0 to 5 and is time-invariant. (*Source:* Spamann, 2010).
Country-Pair Characteristics	
Exchange Rate Volatility	The standard deviation of exchange rates between acquirer and target countries from 36 months up to 1 month relative to the transaction announcement date (authors' calculation).
Same Legal Origin	Dummy variable equal to 1 if acquirer and target countries have the same legal origin, and 0 otherwise. (*Source:* Djankov et al., 2008).
Cross-Border	Dummy variable equal to 1 if acquirer and target are headquartered in two different countries, and 0 otherwise (*Source:* SDC).

Table A2. Alternative Estimation Methods and Dependent Variables – Takeover Activity

This table presents the estimation results of several sensitivity tests. Columns (1)-(8) present the estimates from Tobit models using various definitions of dependent variables. The dependent variables are: Frequency of M&A in columns (1) and (2), Volume of M&A in columns (3) and (4), Number of deals in columns (5) and (6), Deal value (in $ million) in columns (7) and (8). Columns (9)-(12) present the estimates from WLS models using Number of deals in columns (9) and (10) and Deal value (in $ million) in columns (11) and (12) as dependent variables. The specification "WLS" is weighted least squares in which the weight is the average number of listed firms in the country over the sample period. The variables of interest are Union Density and Bargaining Coverage. In all models, we control for industry-country-level and country-level characteristics. Inclusion of fixed effects (FE) is indicated at the end. All variables are defined in Table A1. Standard errors are adjusted for heteroscedasticity and double-clustered by industry-country and year. *t*-statistics are in parentheses. Significance at 10%, 5%, and 1% is indicated by *, **, and ***, respectively.

	1	2	3	4	5	6	7	8	9	10	11	12
	Frequency of M&A		Volume of M&A		ln(1+Number of Deals)		ln(1+ $ Deal Value)		ln(1+Number of Deals)		ln(1+ $ Deal Value)	
Collective Bargaining												
Union Density	***1.003		***0.296		***2.807		**8.003		***1.842		**5.194	
	(3.75)		(2.76)		(3.03)		(2.18)		(2.92)		(2.50)	
Bargaining Coverage		***0.648		***0.231		*1.099		**4.908		***1.534		***3.251
		(3.83)		(2.60)		(1.88)		(2.13)		(3.20)		(2.79)
Industry-Country-Level Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-Level Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Estimation Method	Tobit	Tobit	Tobit	Tobit	Tobit	Tobit	Tobit	Tobit	WLS	WLS	WLS	WLS
Log Likelihood	-2552.475	-2085.418	-486.788	-331.375	-5961.576	-5278.728	-9188.53	-8157.863	-	-	-	-
Pseudo R^2	0.234	0.249	0.592	0.654	0.278	0.289	0.146	0.152	-	-	-	-
Adjusted R^2	-	-	-	-	-	-	-	-	0.71	0.707	0.461	0.456
Number of Observations	6488	5590	6488	5590	6488	5798	6488	5798	6488	5798	6488	5798
Number of Countries	46	43	46	43	46	43	46	43	46	43	46	43

Table A3. Sensitivity Tests - Target CAR and Offer Premium

This table presents the estimation results of several sensitivity tests on target CAR. Panel A presents the results using CAR (-3,+3) and CAR (-5,+5) as dependent variables, Panel B presents the results for alternative definitions of dependent variables, Panel C presents results using various subsamples, and Panel D presents the results using Offer Premium as dependent variable. The dependent variable is CAR (-1,+1) in Panels B and C. The variables of interest are Union Density and Bargaining Coverage. We include the same set of control variables as in Table 9. Inclusion of fixed effects (FE) is indicated at the end. All variables are defined in Table A1. Standard errors are adjusted for heteroscedasticity and double-clustered by country and year. *t*-statistics are in parentheses. Significance at 10%, 5%, and 1% is indicated by *, **, and ***, respectively.

Panel A - Wider Event Windows

	1	2	3	4
	CAR (-3,+3)	CAR (-5,+5)	CAR (-3,+3)	CAR (-5,+5)
Collective Bargaining				
Union Density	*0.525	***0.842		
	(1.96)	(3.08)		
Bargaining Coverage			***0.490	***0.534
			(2.69)	(2.81)
Deal and Firm Characteristics	Yes	Yes	Yes	Yes
Country Characteristics	Yes	Yes	Yes	Yes
Country-pair Characteristics	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Adjusted R^2	0.217	0.227	0.244	0.256
Number of Observations	5351	4646	5272	4578
Number of Countries	36	35	33	32

Panel B - Alternative Definitions of Dependent Variables

	1	2	3	4	5	6
	All Deals	Stake= 5-49%	Stake=100%	All Deals	Stake= 5-49%	Stake=100%
Collective Bargaining						
Union Density	***0.485	*0.291	***1.103			
	(2.66)	(1.93)	(5.21)			
Bargaining Coverage				***0.291	***0.097	***0.608
				(3.74)	(3.96)	(2.68)
Deal- and Firm-Level Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Country-Level Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Country-Pair Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.234	0.096	0.233	0.237	0.098	0.233
Number of Observations	11257	4065	4551	10855	3796	4530
Number of Countries	38	36	33	34	33	30

Panel C - Subsamples

	1	2	3	4	5	6	7	8
Collective Bargaining								
Union Density	***1.102	***1.087	***0.999	***1.191				
	(3.96)	(3.25)	(2.85)	(2.79)				
Bargaining Coverage					***0.317	**0.395	**0.470	**0.479
					(3.01)	(2.33)	(2.51)	(2.13)
Deal- and Firm-Level Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-Level Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-Pair Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
UK & US Drop	Yes	-	-	-	Yes	-	-	-
Scandinavian Countries Drop	-	Yes	-	-	-	Yes	-	-
Non-OECD Drop	-	-	Yes	-	-	-	Yes	-
Financial Services Drop	-	-	-	Yes	-	-	-	Yes
Adjusted R^2	0.219	0.238	0.236	0.240	0.21	0.237	0.236	0.239
Number of Observations	1220	5074	5095	3800	1194	5048	5094	3785
Number of Countries	34	33	28	36	31	29	28	33

Panel D - Offer Premium

	1	2
Collective Bargaining		
Union Density	**0.667	
	(2.04)	
Bargaining Coverage		**0.308
		(2.13)
Deal- and Firm-Level Characteristics	Yes	Yes
Country-Level Characteristics	Yes	Yes
Country-Pair Characteristics	Yes	Yes
Year FE	Yes	Yes
Industry FE	Yes	Yes
Country FE	Yes	Yes
Adjusted R^2	0.506	0.507
Number of Observations	5809	5716
Number of Countries	35	32

Mergers and Acquisitions Across Cultures

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Abstract

We study international mergers and acquisitions from a cross-cultural perspective. We examine in particular (i) which types of cultures are more likely to carry out acquisitions in a different culture to their home society and (ii) which are more likely to complete deals. We use the culture clusters developed by the GLOBE study to classify acquirer and target countries into culturally similar groups. In a sample of 130,000 transactions worldwide, we find that result-oriented cultures are less likely to attempt an acquisition outside their home culture cluster and are less likely to complete announced deals. Cross-cultural acquisitions are also less likely to occur and less likely to complete if the acquirer is from a traditional-oriented culture. Acquirers from people-oriented cultures are more likely to make a cross-cultural acquisition and complete announced deals.

JEL Classification: G34, M14, Z1
Key Words: Mergers & Acquisitions (M&As), Culture Clusters, Cross-Cultural M&As, M&A Deals Completion, Cultural Dimensions

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1. Introduction

Recent research in mergers and acquisitions (M&As) has provided evidence about the effect of cultural characteristics on the decision to carry out cross border transactions, the synergy gains and their division between acquirers and targets, and the use of specific takeover modalities (eg. Ahern et al., 2015; Frijns et al., 2103). Undertaking M&A transactions in different cultures is not limited to a cross border issue. Deciding to acquire a firm in a culturally familiar environment or to leave the comfort of cultural similarity appears to be a first order decision in itself. Cartwright et al. (1995), in a survey-based analysis of Western European and US firms, show that managers prefer to make deals with culturally similar countries (eg. UK – US; Germany – Netherlands), and that these results are culture- rather than language-driven. If such distinctions are observable in a relatively homogenous group of developed economies, we can anticipate these effects to be even stronger in a worldwide sample of M&As. In this paper, we contribute to the existing literature in international M&As by shifting the viewpoint from cross-border to cross-cultural M&As. We examine (i) which cultures are inherently more inclined to undertake M&As in culturally different societies and (ii) prove to be more able to complete these transactions.

A main concern for researchers in the area of culture and finance is to identify causal relations – is national culture really a determinant of economic decision-making, or is it just a by-product of the economic and political system? Few papers have addressed this question, with the exception of Pryor (2007). The author used World Value Survey items to capture culture and finds that countries cluster into similar groups by cultural similarity or by economic system. To tease out the direction of the causal relationship, he uses the quasi-natural experiment provided by East and West German experiences after World War II. He finds that culture in East and West Germany remained almost identical in the post-1945 period, while the economic and political systems of the two countries became dramatically different. Pryor (2007) interprets this to mean that culture leads the economic system rather than the reverse. This tends to suggest that national culture is a distinct and fundamental concept and may therefore be a determinant of economic decision making in addition to other country characteristics. There is also evidence that the effects of national culture

are distinct from those of corporate culture. In a survey-based study of European and Canadian acquirers, Weber et al. (1996) find that national culture is distinct from corporate culture and proves to be more problematic for the M&A process.

The analysis of the effects of culture on M&A activity is relatively recent but some studies provide evidence for its effects. Ahern et al. (2015) measure culture using three items from the World Values Survey and find that differences in trust and individualism are negatively associated with aggregate cross-border merger activity. This study provides strong evidence for the effect of cultural distance but does not explain which types of national culture are more likely to accept a greater distance by making an acquisition outside their own cultural group. Frijns et al. (2013) model the takeover decision including a risk tolerance parameter. They test the predictions of the model empirically, proxying for risk tolerance using the uncertainty avoidance dimension in Hofstede (1980, 2001). Consistent with their predictions, they find a strong negative relationship between uncertainty avoidance and diversifying international M&As. This provides evidence for the importance of one aspect of culture but does not paint the wider picture.

Papers in international business provide interesting insights into the reasons which may make culturally different M&As beneficial or damaging to the acquiring firm. Lee et al. (2014) point out that the effect of cultural differences on the M&A process may be ambivalent. On the one hand, they might hinder integration as they potentially prevent acquirer and target management and employees working together effectively. On the other hand, cultural differences provide more scope for organizational learning. Some cultures may be more likely to perceive the potentially negative effect of cross-cultural M&A while others may be more open to the idea of learning and so embrace cross-cultural deals. Lee et al. (2014) echo previous findings by Reus and Lamont (2009). The latter use a survey to collect cultural and other qualitative data from US acquirers and find that cultural differences are indeed a double-edged sword.

Our research topic requires a complete typology of national culture which enables us to classify countries into culturally similar groups. We find such a typology in the comprehensive cross culture study GLOBE (Global Leadership and Organizational Behavioral Effectiveness) of House et al. (2004), which covers 62 societies. The GLOBE framework has several desirable properties

which make it suitable for our purpose. First, it provides a complete typology of culture which is both theoretically relevant to the business setting and coded in a suitable way for empirical studies on large samples. Second, GLOBE divides societies into 10 different culture clusters (Appendix-1) based upon extant research on clustering societies and considering several factors such as geography, religion, common language and historical accounts. This aspect of the GLOBE typology enables us to reliably identify cross-cultural M&As. Third, the GLOBE framework depicts the cultural dimensions of leadership. Managers are leaders and, in large stakes initiatives such as M&As, we can expect that the leadership culture of a country will exert a notable influence on decision-making. Fourth, the study provides a score for each surveyed society for all its dimensions. Finally, GLOBE appears to provide a more general culture framework than other often-used typologies, most notably Hofstede (1980, 2001), because surveys were carried out in a more recent period in which the global economy was already a reality and because the profiles of the leaders surveyed are much more diverse. Leung et al. (2005) point out that the GLOBE study adds to Hofstede (2001) as it includes two additional dimensions which are of crucial importance to international business: performance orientation and humane orientation.

For our culture typology, we use the score of the nine culture dimensions of the GLOBE study from House et al. (2004). Hofstede (2006) documents that GLOBE culture dimensions are significantly correlated with each other, so multicollinearity may be an issue in the analyses. Therefore, we factor-analyze the culture dimensions using principal component analysis as the extraction method, yielding three statistically viable factors with meaningful interpretations: result oriented (people encourage performance driven behavior, egalitarianism and familism); traditional oriented (people have less tolerance to risk, and accept gender inequality, long-term objectives and nationalism) and people oriented (people demonstrate fairness, helping, kind behavior and egalitarianism). We focus on the three factor-analyzed culture dimensions. We formulate hypotheses for the effects of the culture factors on the decision to carry out M&A transactions outside the home culture cluster and on the probability of deal completion.

We use a large sample of worldwide M&A deals without applying traditional data screening criteria. Our sample is therefore representative of all M&A activity[33], which is important in our case as we aim to provide a complete picture of the decision to acquire outside the bidder's culture and the effect of culture on deal completion. Netter et al. (2011) assess the effect of data screens on the scope and characteristics of M&A activity and point out that many M&A studies are based on relatively small and unrepresentative samples. Inferences made from them can be either incomplete or misleading. For the aggregate country-level analyses we use a sample of 410,567 M&A deals by 175,676 firms. Deal-level analyses require controls for firm characteristics, reducing our sample to 129,454 M&A deals by 31,389 firm-years, a sizeable sample. We include domestic and international transactions and public, private and subsidiary acquirers and targets. We exclude share repurchases but include transactions with a missing deal value in our sample. The proportion of cross-cultural M&A activity varies from 6.12% to 27.92% across acquirer culture clusters and the proportion of M&A deals withdrawn ranges from 1.60% to 6.57%.

Our results show that, keeping other things constant, culture clearly affects international M&A activity. The acquirer countries that are more result-oriented and traditional-oriented are less likely to choose their targets from outside their home culture clusters while people oriented acquirers are more likely to make cross-cultural acquisitions. We also document that several control variables, such as cluster economic size and geographic distance, influence both the choice of undertaking cross-cluster M&As and their probability of completion.

Our paper also explores the effects of cultural dimensions on the outcome of M&A deals. The acquirer countries that are more result-oriented and more traditional-oriented are less likely to complete M&A deals and those which are more people-oriented are more likely to do so.

The remainder of the paper is organized as follows. Section 2 describes the culture framework, section 3 develops hypotheses, section 4 describes the data and research design, section 5 presents the empirical results and the section 6 concludes the paper.

[33]Assuming that databases effectively identify all transactions.

2. Culture Framework

We use the cultural framework from the comprehensive GLOBE study. The GLOBE study is primarily designed to investigate the relationship between cultural values and practices and leadership effectiveness (House et al., 2004)[34]. The study is relevant for our analysis of M&A decisions because it captures leadership-relevant cultural dimensions. It provides data on cultural values from a large number of societies (62 cultures) using survey of 17,300 middle managers from three different industries (food processing, financial services and telecommunications). The researchers started collecting data in 1994, relatively more recently than other culture studies. The GLOBE study has developed nine cultural dimensions which measure the aspects of different cultures worldwide. The cultural dimensions are the following:

- uncertainty avoidance (tendency to follow laid down procedures to avoid uncertain events);
- power distance (leaning to accept uneven distribution of power);
- in-group collectivism (desire for family-based collectivism or familism);
- institutional collectivism (desire for institutional-based collectivism or nationalism);
- gender egalitarianism (minimizing gender inequity);
- assertiveness (dominance in relations);
- future orientation (tendency to make future oriented decisions);
- performance orientation (the desire for continued performance);
- human orientation (kind behaviors towards others).

Some cultural dimensions of the GLOBE study are similar to previous research but they are re-conceptualized. Moreover, new dimensions are developed (Javidan et al., 2006; Lueng et al., 2005). GLOBE provides scores for both cultural values and cultural practices. Ahern et al. (2015) argue that cultural values influence the economic decisions so, in our study, we use nine cultural values and examine their effects on M&A decisions. The GLOBE study groups societies into 10

[34] The GLOBE project was carried out in three phases from 1994, leading to the publication of the full study ten years later (House et al., 2004). Phase 1 involved the development of research instruments. Phase 2 assessed nine fundamental attributes, or cultural dimensions, of both societal and organizational cultures, and explored how these impact leadership in 62 societal cultures. Phase 3 primarily studied the effectiveness of specific leader behaviors (including that of CEOs) on subordinates' attitudes and performance.

different culture clusters based upon extant research and other factors such as geography, language, religion and notably their historical accounts (see Appendix-1). The clustering of societies has been empirically validated (see House et al., 2004, Gupta et al., 2002).The GLOBE study is designed to provide a complete typology of national culture. We therefore include all nine dimensions in our analyses. Cherry-picking some dimensions would compromise the internal consistency of the survey, which has been empirically validated in large samples.

We choose the GLOBE typology instead of the more commonly used Hofstede (1980, 2001) study because the latter is affected by various shortcomings. Hofstede's (1980) typology has been especially questioned regarding the obsolescence of the data, as the national culture measures were developed during the 1970s. In the globalized world, people and nations have come closer to each other, interdependence and interactions among them have dramatically increased. Since cultural groups interact more often, some cultural beliefs and behaviors are transformed (Naylor, 1996), and cultural change becomes more recurrent (Leung et al., 2005). Another limit of the Hofstede (1980) culture typology is its exclusive reliance on managerial survey data from IBM. Hofstede (1980) identifies five cultural dimensions in his study which may not fully characterize the beliefs and behaviors of the different countries included in the IBM data. Hofstede (1980) himself states that "it may be that there exist other dimensions related to equally fundamental problems of mankind which were not found ... because the relevant questions simply were not asked" (pp. 313).

Hofstede (2006) reports that GLOBE cultural dimensions are significantly correlated with each other. This is confirmed by the correlation matrix of the GLOBE dimensions (Table 1). The correlations between performance orientation and in-group collectivism, future orientation and uncertainty avoidance, and institutional collectivism and uncertainty avoidance are positive and highly significant. Power distance and human orientation, and gender egalitarianism and future orientations show negative and highly significant correlations. The inclusion of highly and statistically significantly correlated variables in the regressions may be potentially problematic. To combat this source of multicollinearity in our study, we extract relevant information from the nine GLOBE culture dimensions using principal components analysis. We present the results of the principal components analysis in Table 2. We retain factors with an Eigenvalue greater than or

equal to one, yielding three factors. The factors have meaningful interpretations and explain 67% of the variance.

We retain dimensions with factor loadings greater than or equal to 0.50, following Griffin et al. (2014). The first factor explains 31% of the total variance and has positive loadings, in descending order, on in-group collectivism and performance orientation. We interpret this factor as reflecting result oriented countries. These countries encourage reward, planning and performance. Culture clusters with the highest and lowest scores on this factor are Latin America and Confucian Asia respectively. The second factor explains 25% of the total variance and has positive loadings, in descending order, on uncertainty avoidance, future orientation and institutional collectivism, and a negative loading on gender egalitarianism. We interpret these countries as traditional oriented. They accept gender inequality, avoid uncertain situations, value nationalism and emphasize long-term planning. Culture clusters with the highest and lowest scores on this factor are Southern Asia[35] and Nordic Europe respectively. The third factor individually explains 11% of the total variance and has a positive loading on human orientation and a negative loading on power distance. We interpret these countries as people oriented. They value people and promote the wellbeing of individuals. They are not characterized by a concentration of power at higher levels. Culture clusters with the highest and lowest scores on this factor are Nordic Europe and the Middle East respectively. The viability of the principal component factor analysis is confirmed by calculating Cronbach alpha[36]. Cronbach alphas for the factors are 0.70, 0.70 and 0.60. The assertiveness culture dimension does not load on to any of the factors.

3. Hypothesis Development

[35] Typically, we may think of Japanese management styles as an example of tradition-oriented cultures. The long-term approach typified by the "Seven Spirits of Matsushita" was developed in 1929 to guide the corporation through the decades. The Seven Spirits, renamed Seven Business Principals, still feature prominently on the website of Matsushita's latest incarnation, Panasonic.

[36] Cronbach alpha is used to measure the internal consistency and is a commonly used measure of scale reliability (Peterson: 1994). However, there is no consensus on the threshold. Traditionally, a Cronbach alpha greater or equal to 0.60 is considered as “satisfactory”.

3.1. Result Oriented

Result oriented countries encourage performance driven behavior among individuals or groups. Their cultural values include result-driven behaviors and familism. These countries reward people on the basis of performance. This may hinder people's willingness to take risk. As Lee et al. (2014) and Reus and Lamont (2009) show, cultural differences are a source of risk for an M&A: while the upside may be enhanced possibilities for organizational learning, the downside is the risk of problems during the integration process due to the difficulty (or unwillingness) for acquirer and target employees to work together. As result oriented societies tend to avoid situations where negative outcomes are a distinct possibility, we predict that acquirer countries with high scores for the result oriented dimension show cautious behavior in their economic decisions. This cautious behavior is likely to imply a reluctance to engage in cross-cultural transactions.

We therefore formulate the following hypothesis:
Hypothesis 1: Acquirers from result oriented cultures are less likely to engage in cross-cultural M&As.
Predictions for the probability of deal completion are ambiguous. On the one hand, acquirers from result-oriented societies may experience misgivings about going through with an announced transaction. On the other hand, once the decision to carry out a transaction has been taken, we might expect result-oriented acquirers to do their utmost to avoid failure to complete the transaction. In addition, some cultures (especially Anglo) are more likely to use due diligence during the process (Angwin, 2001), which could increase or reduce the probability of deal completion. We therefore refrain from formulating a precise prediction for this aspect.

3.2. Traditional Oriented

The countries that score high on the traditional oriented factor have low tolerance for uncertain events, encourage nationalism, focus on future oriented goals and accept gender inequality. Economic agents from these clusters will tend to follow laid down procedures and to avoid uncertain situations. Although the findings of Frijns et al. (2013) are specific to diversifying international acquisitions, they suggest that the uncertainty avoidance dimension of traditional-oriented cultures may be an obstacle to cross-cultural M&As. In individualistic countries,

Beugelsdijk and Frijns (2010) find that individuals vigorously invest in foreign asset portfolios. One of the dimensions of the traditional oriented factor is institutional collectivism, which favors a collective over an individual approach. It is therefore likely that the collectivist dimension causes firms in traditional oriented cultures to avoid acquisitions in unfamiliar cultures.

We therefore formulate the following hypotheses:
Hypothesis 2: Acquirers from traditional oriented cultures are less likely to engage in cross-cultural M&As.
We again refrain from formulating a prediction for the probability of deal completion. Tradition-oriented cultures might be reluctant to complete a transaction to avoid the uncertainty inherent in integrating a new entity. But once the acquisition decision has been duly considered and announced, they seek to avoid the uncertainty which would result from a failure to complete.

3.3. People Oriented

The people oriented factor encourages egalitarianism, justice, responsible behavior, fairness, helping others and honesty. The culture of these countries aims to ensure that people behave in a responsible manner and show positive attitudes. People in such countries promote profitable activities to uphold countries rather than competing in a hostile way. People should be encouraged to work for the collective good and treat everyone as equal. We expect that individuals in people oriented societies may not be limited by boundaries while making investment decisions and more specifically, that acquirers in these countries are more likely to engage in cross-cultural M&As. There is some evidence for this using Finnish data. Our principal components analysis results indicate that the Scandinavian culture cluster is the most people-oriented. Sarala and Vaara (2010) and Vaara et al. (2012), on a sample of Finnish acquirers, find evidence that international M&As are considered positively as they provide greater opportunities for knowledge sharing.

We therefore formulate the following hypotheses:
Hypothesis 3: Acquirers from people oriented countries are more likely to engage in cross-cultural M&As.

While we are unable to formulate a hypothesis for the probability of deal completion for the two other factors, the characteristics of the people-oriented factor suggest a higher probability of deal completion. Acquirers from this type of culture are unlikely to get cold feet and pull out of the deal, especially as they are more open to the positive side of culturally different M&As (see, for example, Sarala and Vaara, 2010; Vaara et al., 2012).

We therefore formulate the following hypothesis:
Hypothesis 4: Acquirers from people oriented countries are more likely to complete transactions.

4. Data and Methods

4.1. Data

To investigate the effects of culture in M&A activity, we collect data from different sources for the period 1990-2009.We use the nine dimensions of GLOBE study as a culture typology. Our sample is therefore restricted to the 62 GLOBE societies. Data on each culture dimension is obtained from House et al. (2004). For M&A data, we extract the M&A deals by 62 GLOBE societies from SDC (Security Data Company) for our sample period. The sample includes all transactions classified as "completed" or "withdrawn" by SDC. We exclude M&A deals where acquirer or target nation is missing or SDC reports it as unknown, multinational, supranational, etc. We do not restrict our sample to public acquirers and targets, we also include private and subsidiary acquirers and targets. We exclude all government firms. We place no restriction on deal value and include deals with missing values. Our sample is therefore provides a complete picture of all M&A activity around the world. We obtain a sample of 410,567 mergers and acquisitions transactions by 175,676 firms across the 62 GLOBE societies for our sample period.

4.2. M&A Data Description

Table 3 reports the distribution of our sample by year. Panel A describes the numbers of intra-cultural and cross-cultural M&A deals. Our sample contains 359,441 intra-cultural M&A deals and 51,126 cross-cultural M&A deals. Panel B shows the numbers of uncompleted and completed M&A deals. In our sample, 395,145 M&A deals are completed and 15,422 M&A deals are withdrawn. The classically reported M&A waves of the end of the nineties and the mid-two thousands are present in our date, both for intra-cultural and cross-cultural transactions. Table 4 shows the cluster wise distribution of our sample. Panel A describes the distribution of M&A deals over 10 GLOBE culture clusters[37]. The top three acquirer culture clusters represent 80% of M&A deals of our sample. The largest acquirer culture cluster is *Anglo* (243,328), the next largest culture cluster is *Confucian Asian* (45,303) and third largest culture cluster is *Latin Europe* (38,223) or

[37] We are aware that the statistics we provide on M&As by culture cluster assume that coverage by SDC is equivalently complete for all 62 GLOBE societies.

59.27%, 11.03% and 9.31% of our sample respectively. The smallest acquirer culture cluster in our sample is *Sub-Saharan Africa* (201) which makes up only 0.05% of our sample. The top three largest cross-cultural acquirer clusters in our sample are *Anglo* (21,833), *Germanic Europe* (9,540) and *Latin Europe* (7,181) which make up 42.70%, 18.66% and 14.05% respectively of total cross-cultural M&A activity. *Confucian Asia* is the second largest acquirer culture cluster in our sample but its cross-cultural M&A activity is relatively low and stands at fourth place. Panel B describes the distribution of completed and failed M&A deals across GLOBE culture clusters. The top three acquirer culture clusters for failed M&A deals in our sample are *Anglo* (9,992), *Confucian Asia* (2,149) and *Southern Asia* (1,014) with 64.79%, 13.93% and 6.58% respectively of total failed M&A deals.

Table 5 shows the cross tabulation of cross-cultural M&A deals in our samples. Panel A represents the numbers of M&A deals and Panel B represents the percentages of M&A deals. The majority of M&A deals remain in their respective culture clusters (intra-cultural deals), as clearly apparent in the main diagonals of the two panels. Of the cross-cultural deals, the *Anglo* culture cluster makes a large number of cross-cultural deals (21,833) among total cross-cultural M&A activity (51,126 deals). The *Confucian Asia* culture cluster undertakes M&A deals in the *Southern Asia* culture cluster which is geographically close. But geographical proximity does not seem prevalent in other clusters: for example, *Latin Europe* makes significant M&A deals in the *Latin American* culture cluster and the *Middle East* makes most of its M&A deals with the *Germanic* and *Latin Europe* culture clusters.

Figure 1 shows the volume of cross-cultural M&A deals over sample period 1990-2009. The volume of cross-cultural M&A deals has increased overtime and appears to come in waves. Figure 2 represents the proportion of cross-cultural M&A deals by each acquirer culture cluster. For example, if *Anglo* makes 100 M&A deals, 9 deals are outside its own culture cluster. *Germanic Europe* has the highest proportion of cross-cultural M&A deals (27.92%) to its total M&A activity while *Eastern Europe* has the lowest proportion (6.12%). Figure 3 represents the proportion of uncompleted M&A deals to total M&A activity by each acquirer culture cluster. For example, if *Nordic Europe* makes 100 M&A deals, 1 deal remains uncompleted while if the *Middle East* makes

100 M&A deals, 6 deals fail to complete. The proportion of failed deals shows considerable variation across GLOBE culture clusters.

4.3. Dependent Variables

To investigate the impact of cultural values on M&A activity, we carry out our analyses both at the firm level and at the country level. We study the propensity to undertake cross-cultural M&A deals and the probability of completing announced transactions.

For cross-cultural M&A analysis, at the deal level, we form a binary variable equal to 1 if the acquirer firm chooses its target from a different culture cluster and 0 otherwise. For the country level analysis, we calculate the proportion of cross-cultural M&A deals in total M&A activity per country in year t. For the completion of M&A deals analysis, at the deal level, we for a binary variable= 1 if SDC records the M&A deal status as 'completed' and 0 if 'withdrawn'. For the country level analysis, we calculate the proportion of completed M&A deals in total M&A activity per country in year t.

4.4. Variables of interest

We use nine the GLOBE culture dimensions at the societal level. They are coded on a Likert scale from 1 to 7. A high score on a dimension implies that the society accepts or encourages that characteristic in its culture (and vice-versa). For each deal, we identify the nation of the acquirer and target and match with the corresponding society in the GLOBE study. In most cases, a society corresponds to a country. In cases where one country may have scores for two or more different component societies, we develop rules to assign the firms in our sample to a society. In particular, for South Africa, as the country contains societies in both the Anglo and the Sub-Saharan African clusters, we assume that most larger business in South Africa are part of the previously "white" economy during our sample period and therefore code all South African firms as Anglo. Switzerland has firms in both the Germanic Europe and Latin Europe clusters. We use the address of each firm in our sample to determine to which society it belongs.

To mitigate the potential effects of multicollinearity, we carry out a principal components analysis as described in Section 3 above. To compute the factor scores, we multiply the factor loadings resulting from the principal components analysis by the GLOBE score for each culture dimension appearing in the respective factor and sum them for the factor score.

4.5. Control variables

Prior research shows that firm level, deal level and national characteristics also affect international M&A activity (see e.g., Ahern et al. (2015), Erel et al. (2012)). To account for their possible effects, we include appropriate control variables in our analysis. Since our focus is on cross-cultural M&A deals and we use the GLOBE culture clusters, we also control for the culture cluster characteristics. Variable definitions are provided in Appendix-2.

We control for both the acquirer and target countries' economic size, economic growth and individual wealth using GDP, GDP growth and GDP per capita from World Bank Development Indicators. We record real interest rate differences between acquirer and target countries from World Bank Development Indicators. Corporate governance differences are likely to affect international M&A activity. For this purpose, we use the anti self-dealing index developed by Djankov et al. (2008) and the quality of accounting disclosure index from La Porta et al. (1997, 1998). These indicators are only available for one specific year, but such characteristics are highly persistent through time and should therefore provide an adequate control for national corporate governance differences. Exchange rate differences across countries are related to international mergers (Ahern et al., 2015). We therefore control for exchange rate volatility between acquirer and target countries over a period of 12 months prior to the announcement date. The data on exchange rates is obtained from the DataStream database. To capture the effects of acquirer and target countries' economic openness, we use the total of exports and imports as a proportion of GDP from World Bank Development Indicators. Countries' quality of institutions and investment profiles are likely to impact international M&As. Following Erel et al. (2012) and Bekaert et al. (2005, 2007), we create an index for institutional quality using three subcomponents (Law &

Order, Corruption and Bureaucratic Quality) of the International Country Risk Guide (ICRG)[38]. The investment profile of the countries is also recorded from ICRG political risk ratings, which determines the investment atmosphere. The European Union (EU) represents a special case, as its countries are classified into several different culture clusters although they are geographically close and, perhaps more importantly, carry out their business activities in a free trade area. We control for a potential EU effect by including a dummy variable representing EU acquirers. To account for the effects of the deal and firm characteristics, we include firm size, firm types (private, public), cash deal dummy, same industry dummy, financial acquirer dummy and deal attitude dummy.

There are some culture cluster characteristics which are likely to impact cross-cultural M&A activity such as the culture clusters' economic size and the geographical dispersion of acquirer culture clusters. If the acquirer cluster's economic size is larger, then we expect the acquiring firms to be more likely to make M&A deals in their own culture cluster due to the opportunities afforded by high levels of economic activity. We record the economic size of acquirer culture clusters as the sum of acquirer societies' GDP in a specific culture cluster scaled by the sum of GDP of the GLOBE societies.

We find evidence in the international M&A literature that geography matters (Ahern et al. (2015), Erel et al. (2012)). We measure geography at two levels, geographical distance and geographical dispersion. We estimate the distance between acquirer and target countries using great-circle distance formula as follows:

$$Dist_{i,j} = 3963.0 * arcos[\sin(lat_i) * \sin(lat_j) + \cos(lat_i) * \cos(lat_i) * \cos(long_j - long_i)] \quad (1)$$

where $Dist_{i,j}$ is the distance between country i and country j, $long_i$ and lat_i are the longitude and latitude of country i respectively. Country coordinates were collected from longitude and latitude section of the Mapsofworld website (Mapsofworld, 2014).

[38] For details on these sub-components, see table 1 of Bekart et al. (2005).

For cross-cultural M&A deals, we argue that geographical dispersion of acquirer culture clusters can affect the probability of cross-cultural M&A deals. If the acquirer culture cluster is geographically dispersed, we may expect that acquirer firms choose their targets from different but geographically proximate culture clusters. We estimate the geographical dispersion of an acquirer culture cluster as the standard deviation of the geographical distance (see Equation 1) between the capital cities of countries in each culture cluster.

Prior research has shown religion and language are likely to affect economic outcome (for example, Ahern et al. (2015) and Guiso et al. (2003). We do not record religion and language in our main model, because the GLOBE culture clusters are created based on similarity in their cultural values and other factors including language, religion, etc. (House et al., 2004). In addition, Cartwright et al. (1995) finds that the influence of language on managers' preferences for working with culturally similar countries is distinct from the influence of cultural characteristics. We do, however, control for language and religion in a separate robustness check.

Ahern et al. (2015) argue that same legal origin and shared borders increase bilateral M&A activity and provide evidence that cultural distance reduces cross-border mergers between countries. We control for the legal origin of the countries and cultural distance. The cultural distance is measured as the Cartesian distance in the nine GLOBE culture dimensions between the acquirer and target nations as follows:

$$Cultural\ Distance = \frac{\sqrt{\sum_{i=1}^{9}(S_{A,i}, S_{T,i})^2}}{9} \quad (2)$$

where $S_{A,i}$is the acquirer country's score on culture dimension *i*, and $S_{T,i}$ is the target country's score on culture dimension i.

The cultural diversity of acquirer culture clusters may impact their choice of target, therefore, we calculate cultural diversity as a centroid measure of culture as follows:

$$Cultural\ Diversity = \frac{\sum_{i,j} Culture\ Distance_k}{n(n-1)/2} \quad (3)$$

where cultural diversity is the difference between acquirer countries in acquirer culture cluster *k* and n is the number of countries in a culture cluster. It is scaled by the number of pairs of countries and the measure is normalized by the size of culture clusters.

The descriptive statistics of all the variables in this study are given in Table 6 and definitions of the variables in Appendix-2.

4.6. Methods

We carry out our analyses both at the deal level and at the country level. Deal level analyses are important to gain an insight into the motivations of individual acquirers. We also carry out aggregate analyses at the country level to alleviate concerns about possible deal-level correlation due, among other factors, to the presence of repeat acquirers in our sample.

In the deal level analyses, the dependent variable is a binary variable representing either the decision to carry out deal outside the home culture cluster or the deal completion. Therefore, we use probit models. We include time and industry dummies in the regressions and cluster standard errors at the acquirer level.

In the country-level analyses, we aggregate cross-cultural M&A deals or deal completion by acquirer country-year and regress the proportion of cross-cultural deals or completed deals on the culture factors and controls. As the dependent variable is truncated, we implement a Tobit model. We include year dummies in all the regressions.

Our main analyses examine the effect of the factor-based cultural dimensions of the GLOBE study on the likelihood of carrying out a cross-cultural M&A and the probability of deal completion. However, the results for the three factor-analyzed culture dimensions may be affected by our decision to carry out a first stage principal component analysis on the nine GLOBE dimensions and use the resulting factor variables in our analysis. We therefore repeat our analyses using all nine GLOBE dimensions using the same empirical specifications as for the analyses based on the three culture factors.

5. Empirical Results

This section presents the empirical results of our study. It is divided into two parts. First, we present the empirical results of our analysis of the probability of cross-cultural M&A deals. Second we focus on the probability of deal completion. Each analysis is first carried out on factor based cultural dimensions, and then replicated on the GLOBE culture dimensions.

5.1. Probability of Cross-Cultural M&A

5.1.1. Factor-based Culture Dimensions

Deal Level Analysis.

Panel A of Table 7 presents results of regressions of the effects of the culture dimensions on the probability of cross-cultural M&A deals. Column 1 presents the results from estimations using the full sample, with all control variables including deal and firm characteristics, country characteristics (economic, institutional and legal variables) and acquirer cluster characteristics (economic size). Columns 2 to 4 present the results for different sub-samples obtained from data filters commonly applied in the M&A literature, for example, as in the significant deals defined by Masulis, Wang, and Xie (2007) . The results show that all three factor-analyzed culture dimensions are significantly related to cross-cultural M&A activity and are robust across sample specifications. The *result oriented* dimension is negatively and significantly related to cross-cultural M&A activity. This is in line with our prediction. It shows that the result driven behavior of people in the society reduces their willingness to take risk. The *traditional oriented* dimension is also significantly negatively related to cross-cultural M&A activity. Firms in societies that avoid uncertain situations, tolerate gender equality, embrace collectivism and encourage future orientation are less likely to undertake cross-cultural M&A deals. This finding is again consistent with our hypothesis. The *people oriented* culture dimension is positively and significantly related to cross-cultural M&A activity, implying that acquirer firms from *people oriented* countries are more likely to choose targets from outside their own culture clusters then other countries. Results are unchanged across the different sample specifications.

Country Level Analysis

Panel B of Table 7 presents the results for aggregated country-year cross-cultural M&A deals. We aggregate data from 410,567 observations for this analysis. Columns 1 to 4 present the regression

estimates of the Tobit model. These results are consistent with the deal level analyses. The *result oriented* and *traditional oriented* dimensions are significantly negatively related to cross-cultural M&A activity while *people oriented* culture is positively related to it, in line with our predictions.

5.1.2. GLOBE Culture Dimensions

Table 8 presents the results of the effect on the nine GLOBE culture dimensions on the probability of acquirers choosing targets outside their own culture. We include all control variables specified in Panel A of Table 7 (unreported). Column 1 presents the results of our main model using the full sample. Columns 2 to 4 present the results for sub-samples corresponding to columns 2 to 4 of Table 7, Panel A.

Results are consistent with our findings based on factor-analyzed dimensions. Performance orientation and in-group collectivism both load positively onto the *result-oriented* factor and display the negative coefficients consistent with the negative association between the factor and the probability of cross-cultural M&A deals. Likewise, signs on the coefficients for three out of four dimensions which load into the *tradition-oriented* factor (future orientation, gender egalitarianism and uncertainty avoidance) are consistent with results for the *tradition-oriented* factor variable. Finally, power distance loads negatively onto the *people oriented* factor and human orientation loads positively into it. The negative and significant coefficient on power distance and positive and significant coefficient on human orientation are consistent with the positive sign on the *people oriented* factor variable in the original analysis.

Performance orientation has negative coefficient (significant at the 1% level) in all sample specifications. This shows that societies encouraging performance improvement, innovation and excellence in their cultures are more likely to make M&A deals in their own culture clusters. In-group collectivism is significantly negatively related to cross-cultural M&A activity at the 1% level and is robust to all sample specifications. This dimension is similar to the individualism and collectivism concepts used in the literature and shows that individualistic societies are more likely to choose their targets from different culture clusters while collectivist societies choose their targets from their own culture clusters. Uncertainty avoidance is negatively associated with cross-

cultural M&A activity at 1% level in the full sample as well as in other sample specifications, except for M&A deals above $100 million deal value. This suggests that societies which circumvent uncertain events are less likely to choose targets outside their culture cluster. Future orientation is marginally negatively related at 10% level to cross-cultural M&A activity and loses its significance for other sample specifications. Gender egalitarianism is significant at 1% level and positively associated with the probability of a cross-cultural deal in all sample specifications. Institutional collectivism is insignificant in all specifications, which may be an indication of collinearity with other GLOBE dimensions. Power distance is negatively related to cross-cultural M&A activity at the 5% level in the full sample but loses its significance for other sample specifications. Human orientation is positively related to cross-cultural M&A activity at the 1% level in all sample specifications except for M&As with a deal value above $100 million. Assertiveness is negatively associated with cross-cultural M&A activity at 1% level and is robust to all sample specifications. This implies that societies accepting more aggressive behaviors are more likely to make cross-cultural M&A deals.

In line with prior research, many of the country characteristics are significant determinants of cross-cultural M&A activity. As predicted, culture cluster economic size has a significant impact on cross-cultural M&A activity and acquirers are less likely to choose their targets from different culture clusters if the economic activity is larger in their own.

5.1.3. Robustness Checks– Probability of cross-cultural M&A Deals

We present robustness checks to validate findings presented in the previous section. Panels A and B of Table 9 display the results. We use the same control variables as in Table 7 Panel A (unreported). In our main sample, we include completed and failed M&A deals. In our first robustness test, we remove failed M&A deals from our sample and keep the completed deals only. The results reported in Column 1 of Panel A - Table 9 shows that the coefficient signs and significance remain unchanged.

Our main sample includes 151,027 US M&A deals (36% of the sample). This may be an issue as there is evidence that different types of cultural characteristics US and emerging economies affect

the M&A decision differently (Malhotra et al., 2011). We check whether our results are driven by US M&A deals by excluding them from our sample. We find that our results are not affected (see Column 2 of Panel A - Table 9). The *Anglo* culture cluster represents 59% (243,328 M&A deals) of our total M&A sample. We might therefore expect that the *Anglo* culture cluster drives our main results. Column 3 of Panel A - Table 9 reports the regression estimates when we exclude the Anglo culture cluster from our main sample. Our full-sample results are not driven by the *Anglo* cluster.

If acquirer firms make repetitive acquisitions, it is likely they learn from their experiences. Moreover, repetitive acquisitions are a source of correlation across deals. To avoid picking up the learning effects of serial acquirers, we take only first M&A deal by acquirer firms during our sample period. We find the results consistent with our main analyses (see Column 4 of Panel A - Table 9).

Our intra-cultural deals include domestic deals. Our current results may therefore just be picking up the effects of cross-border rather than cross-cultural mergers. We exclude domestic deals and limit our sample to cross-border M&As. Column 5 of Panel A – Table 9 reports the results which are consistent with our main analysis, confirming that we are truly showing the effects of culture on cross-cultural mergers.

In Panel B of Table 9, we show results for additional control variables. Column 1 displays results when we control for the cultural diversity of acquirer culture clusters. The cultural diversity variable is insignificant and our main results are unaffected. Column 2 presents results when we control for the geographical dispersion of the acquirer culture cluster. Our results for the culture factors remain unchanged although the geographical dispersion variable is positive and significant, implying that firms in geographically more dispersed clusters are more likely to make cross-cultural acquisitions. Findings when the cultural distance of the culture cluster is included as a control variable are provided in column 3. Our main results are unaffected by the inclusion of the control variable, which is itself positive and significant, indicating that firms from culturally more diverse clusters are more likely to acquire outside their home cluster. Column 4 shows results when

additional controls for cultural, legal and geographical characteristics are included. Results for the culture factors remain significant and keep their signs.

5.2. Probability of Deal Completion

5.2.1. Factor-based Culture Dimensions

This section reports results for the probability of completion of M&A deals using factor-based culture dimensions.

Deal Level Analysis

Panel A of Table 10 presents the results of the effects of factor-analyzed culture dimensions on completion of M&A deals. We control for firm, acquirer and target country, country pair and culture cluster characteristics. Columns 1 and 2 present regression results for the full sample, and columns 3 and 4 present the regression results for the sub-sample of M&A deals with a deal value above $1 million. The coefficient on the both *result oriented* and *traditional oriented* culture dimensions are negative and significant at the 1% level in all cases. The empirical evidence shows that firms located in societies which strongly value performance are less likely to complete M&A deals. The same is true of firms in cultures with strong uncertainty avoidance and a long-term orientation. The coefficient on the *people oriented* dimension is positive and significant at the1% level for the full sample and sub-sample. Consistent with our prediction, firms located in countries that encourage egalitarianism and show positive attitudes in their behaviors are more likely to complete M&A deals. Perhaps surprisingly, it is more likely that cross-cultural deals are completed. The intuition behind the completion of cross-cultural deals could be that they involve additional costs compared to culturally familiar mergers and firms only participate in transactions for which they anticipate that the completion probability is high. We should therefore remain cautious at this stage in the interpretation of this result. The observed ex-post evidence may be a by-product of this self-selection process. The geographical distance between acquirer and target countries also increases the probability of deal completion, most likely for similar reasons.

Country Level Analysis

We investigate the effects of the cultural dimensions on deal completion at country level. We aggregate the completed M&A deals by country-year and estimate the proportion of completed deals over all deals. We aggregate data from 410,567 observations for this analysis. We regress

the proportion of completed deals on the factor-analyzed culture dimensions. As the dependent variable is truncated, we implement a Tobit model. Panel B of Table 10 shows the results. We include time fixed effects in all the regressions. Columns 1 and 2 present the regression estimates from Tobit models. For the main sample, we do not find significant results. For M&A deals with a deal value equal to or above one million dollars, the resulted oriented dimension is negatively and the people oriented dimension is positively associated with the probability of deal completion. The lack of significance of at the aggregate level is somewhat puzzling but may be due to noise in the numerous observations for which key M&A data is missing. We repeat the aggregate probability of deal completion analysis for the 129,592 deals which form the basis of our deal-level analysis. Unreported results show that the coefficients on all three culture factors are significant, with the signs in the same direction as in the deal-level analysis.

5.2.2. GLOBE Culture Dimensions

Table 11 presents the probit estimates for the probability of undertaking cross-culture M&A transactions. We use the same set of control variables as in Panel A of Table 10 (unreported). We also include time fixed effects. Columns 1 and 2 present the results for the full sample while columns 3 and 4 present the results for the sub-sample of deals larger than $1 million. We include the cross-cultural M&A deals dummy in columns 1 and 3 and the geographic proximity variable as an additional variable in columns 2 and 4.

The results show that culture dimensions affect the probability of deal completion. The effects are, however, more pronounced for the sub-sample of M&A deals with a deal value greater than or equal to $1 million. Performance orientation and in-group collectivism load positively onto the *result oriented* dimension and show the negative coefficients consistent with the negative sign on the *result oriented* factor variable in the main analyses. Signs on the dimensions making up the *tradition oriented* factor variable are consistent with the loadings resulting from the principal components analysis, except for uncertainty avoidance whose coefficient is perhaps surprisingly positive. One possible explanation for this finding is that societies where uncertainty avoidance is high take greater steps to understand the target business better before deciding on an acquisition, in the form of more due diligence for example. This result would therefore be once again a manifestation of some form of ex-ante self-selection process. For the *people oriented* factor, the

power distance dimension is in the expected direction but the human orientation dimension is not significant. The results for the GLOBE dimensions are therefore broadly consistent with the original analyses, with the exception of the uncertainty avoidance dimension and the human orientation dimension.

The results also show that the probability of deal completion is higher when acquirer and target countries are from two different culture clusters. International M&A activity involves additional costs while negotiating M&A deals, especially in cross-cultural M&A deals where acquirer and target firms are at greater cultural distance. We check the effects of geography and find that when the acquirer and target countries are more geographically distant, probability of completion of M&A deals is higher. In both cases, the costs of undertaking these transactions are higher and it is therefore probable that acquirers only attempt them when the risk of not completing the transaction is low.

5.2.3. Robustness Checks – Probability of Deal Completion

In Panel A & B of Table 12 we report a set of additional robustness checks. We use the same set of control variables as in Panel A of Table 10 (unreported).

To be sure that our results are not driven by US M&A deals, we exclude them from our sample (column 1 of Panel A – Table 12). The results show that US deals do not affect our findings for the probability of deal completion. If acquirer firms make repetitive acquisitions, it is likely that they learn from their experience and the completion rate of successive deals may be higher. To avoid these learning effects, we take only the first M&A deal by acquirer firms during our sample period. We find similar results to those in our main analyses (column 2 of Panel A – Table 12).

Further we include culture distance control variable in column 1 of Panel B – Table 12, which is not related to completion of announced transactions. However, does not affect our main findings. In column 2 of Panel B – Table 12, we include set of additional controls (same language, same religion, same legal origin and share border) and the inclusion of the variables do not change our main findings.

6. Conclusion:

In this study, we extend the existing cross-border M&A literature to investigate the effects of culture on cross-cultural M&A activity and the probability of deal completion. We use the culture dimensions of the recent and comprehensive cross-culture GLOBE study (House et al., 2004). We analyze a large sample of 410,567 M&A deals by 175,676 acquiring firms at aggregate country-level analysis and 129,454 M&A deals by 31,389 acquiring firms across 62 GLOBE societies for the period 1990-2009.

We find evidence that the culture dimensions of acquirer societies affect their decision carry out a cross-cultural transaction and the probability of deal completion controlling for different firm, country and culture cluster characteristics. We show that result-oriented and traditional-oriented acquirer societies are more likely to choose their targets from their own culture cluster while people-oriented acquirer societies are more likely to choose their targets from different culture clusters. Economically larger culture clusters are more likely to acquire firms from within their own cluster and firms located in culture clusters with lower levels of economic activity are more likely to choose cross-cultural targets. We extend our analysis to the outcome of M&A deals and find that countries with a more result-oriented culture and a more traditional oriented culture are less likely to complete M&A deals while countries with a more people-oriented culture are more likely to complete. Cross-cultural M&A deals also increase the probability that deals will be completed. These results are robust across different sample specifications, different estimations and sets of controls. We contribute to the broader literature on international M&A by showing that cultural ties play an important and economically significant role in the economic decisions of managers.

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Figure 1: The figure shows the distribution of cross-cultural M&A deals for the sample period (1990-2009) across GLOBE culture clusters.

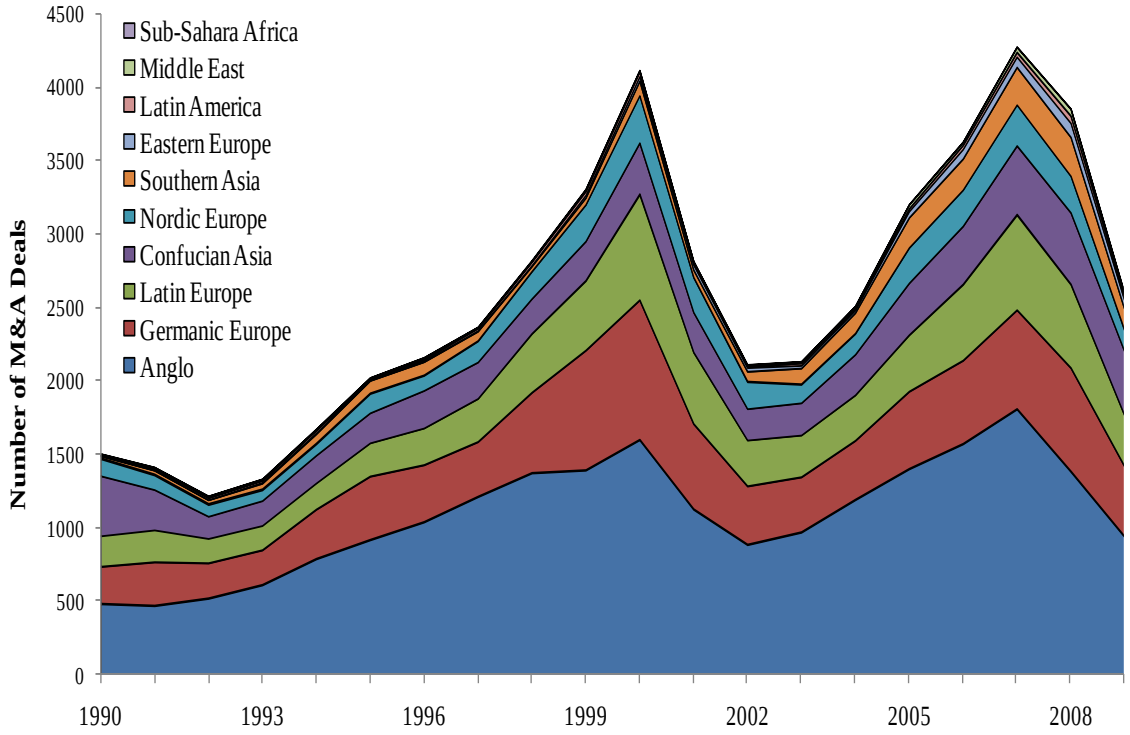

Figure 2: The figure shows the cluster wise proportion of cross-cultural M&A deals to the total M&A activity of each culture cluster for period 1990-2009.

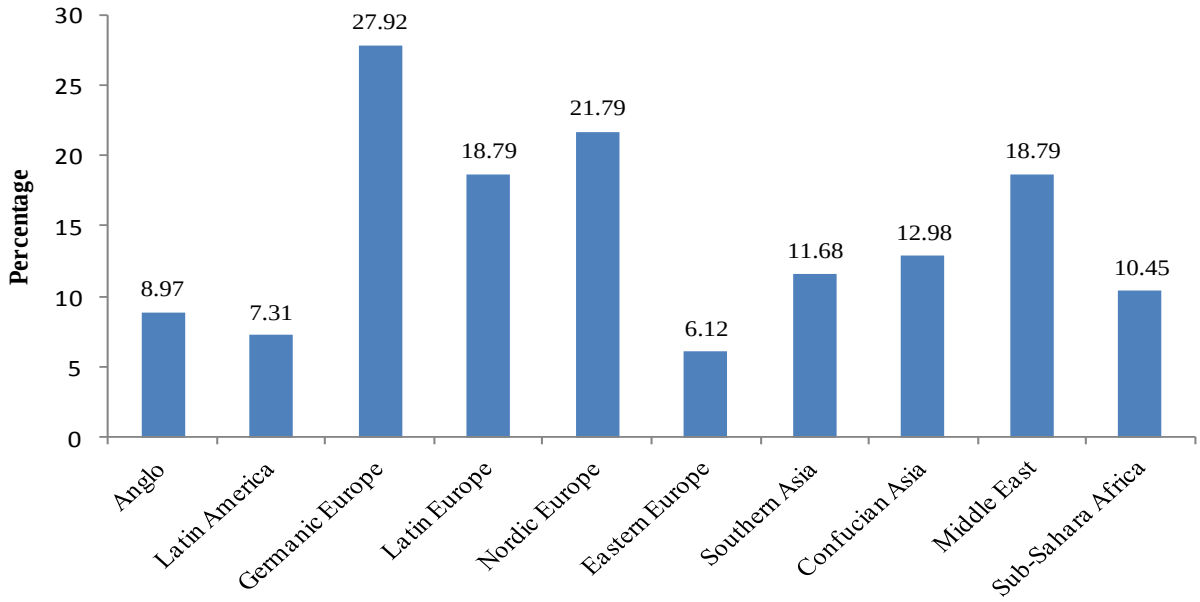

Figure 3: The figure shows the cluster wise proportion of failed M&A deals to the total M&A activity for the period 1990-2009.

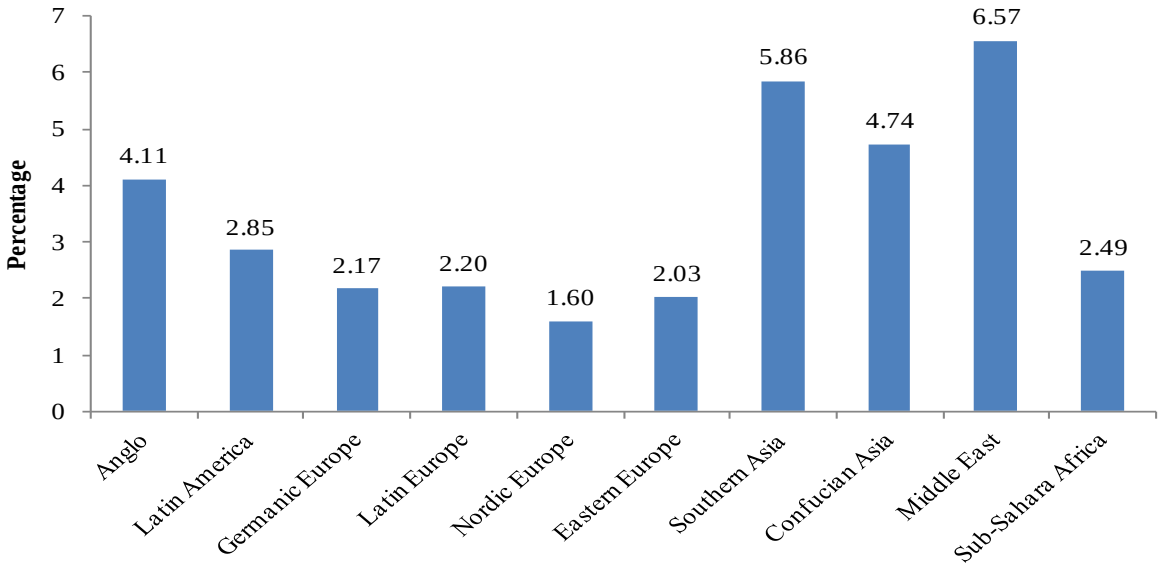

Table 1 - Correlation Matrix of GLOBE Dimensions
Table 1 provides the correlation matrix of nine GLOBE culture dimensions. ***, **, * indicate significance at 1%, 5% and 10% respectively.

GLOBE Dimensions	PO	FO	GE	AS	IC	IGC	PD	HO	UA
Performance Orientation (Po)	1								
Future Orientation (FO)	***0.414	1							
Gender Egalitarianism (GE)	*0.216	***-0.354	1						
Assertiveness (AS)	-0.013	0.071	**-0.270	1					
Institutional Collectivism (IC)	***0.437	***0.487	-0.043	-0.210	1				
In-group Collectivism (IGC)	***0.592	***0.499	0.154	-0.012	**0.300	1			
Power Distance (PD)	***-0.392	-0.071	***-0.491	**0.292	**-0.306	*-0.236	1		
Human Orientation (HO)	0.059	-0.121	0.209	-0.106	-0.137	-0.152	***-0.418	1	
Uncertainty Avoidance (UA)	0.143	***0.560	***0.386	0.169	***0.362	**0.265	0.075	-0.146	1

Table 2 – GLOBE Dimensions Factor Analysis
Table 2 shows the factor loadings of nine culture dimensions at societal level of GLOBE study for 62 societies on four factors. The loadings with absolute value equal or less than 0.50 are left blank.

	Factor 1 [Result Oriented]	**Factor 2 [Traditional Oriented]**	**Factor 3 [People Oriented]**
Eigen values	2.76	2.24	1.02
Percentage variance explained	0.31	0.25	0.11
Cumulative percentage.	0.31	0.56	0.67
Factor Loadings			
Assertiveness			
Institutional Collectivism		0.50	
Uncertainty Avoidance		0.81	
Gender Egalitarianism		-0.72	
Future Orientation		0.76	
In-group Collectivism	0.86		
Performance Orientation	0.84		
Power Distance			-0.65
Human Orientation			0.94
Cronbach Alpha	0.70	0.70	0.60

Table 3 - M&A Sample Composition by Year

Table 3 Panel A shows the year wise distribution of intra-cultural (Column 'No'), cross-cultural (Column 'Yes'), total (column 'Total') M&A deals, and Panel B shows completed (Column 'Yes'), failed (Column 'No') and total (column 'Total') M&A deals. Sub-column 'No.' shows the number of M&A deals, 'Col%' represents the percentage of M&A deals to the respective column total and 'Cum%' indicates the cumulative percentage of M&A deals.

Panel A

Years	Cross-Cultural Mergers and Acquisitions Deals (Year Wise)								
	Intra-cultural			Cross-cultural			Total		
	No.	Col %	Cum %	No.	Col %	Cum %	No.	Col %	Cum %
1990	7,958	2.21	2.21	1,504	2.94	2.94	9,462	2.30	2.30
1991	9,951	2.77	4.98	1,412	2.76	5.70	11,363	2.77	5.07
1992	9,742	2.71	7.69	1,215	2.38	8.08	10,957	2.67	7.74
1993	10,423	2.90	10.59	1,332	2.61	10.69	11,755	2.86	10.60
1994	11,967	3.33	13.92	1,673	3.27	13.96	13,640	3.32	13.93
1995	14,514	4.04	17.96	2,024	3.96	17.92	16,538	4.03	17.95
1996	15,528	4.32	22.28	2,162	4.23	22.15	17,690	4.31	22.26
1997	17,524	4.88	27.16	2,370	4.64	26.78	19,894	4.85	27.11
1998	19,353	5.38	32.54	2,826	5.53	32.31	22,179	5.40	32.51
1999	20,472	5.70	38.23	3,313	6.48	38.79	23,785	5.79	38.30
2000	23,789	6.62	44.85	4,125	8.07	46.86	27,914	6.80	45.10
2001	18,131	5.04	49.90	2,821	5.52	52.37	20,952	5.10	50.21
2002	16,650	4.63	54.53	2,114	4.13	56.51	18,764	4.57	54.78
2003	18,377	5.11	59.64	2,135	4.18	60.69	20,512	5.00	59.77
2004	20,558	5.72	65.36	2,513	4.92	65.60	23,071	5.62	65.39
2005	22,538	6.27	71.63	3,208	6.27	71.88	25,746	6.27	71.66
2006	25,194	7.01	78.64	3,635	7.11	78.99	28,829	7.02	78.68
2007	27,881	7.76	86.40	4,285	8.38	87.37	32,166	7.83	86.52
2008	26,210	7.29	93.69	3,862	7.55	94.92	30,072	7.32	93.84
2009	22,681	6.31	100	2,597	5.08	100	25,278	6.16	100
Total	**359,441**	**100**		**51,126**	**100**		**410,567**	**100**	

Panel B

Years	Completed Mergers and Acquisitions Deal Year Wise								
	Completed			Withdrawn			Total		
	No.	Col %	Cum %	No.	Col %	Cum %	No.	Col %	Cum %
1990	8,689	2.2	2.20	773	5.01	5.01	9,462	2.30	2.30
1991	10,550	2.67	4.87	813	5.27	10.28	11,363	2.77	5.07
1992	10,219	2.59	7.45	738	4.79	15.07	10,957	2.67	7.74
1993	10,926	2.77	10.22	829	5.38	20.44	11,755	2.86	10.6
1994	12,870	3.26	13.48	770	4.99	25.44	13,640	3.32	13.93
1995	15,780	3.99	17.47	758	4.92	30.35	16,538	4.03	17.95
1996	16,993	4.3	21.77	697	4.52	34.87	17,690	4.31	22.26
1997	19,118	4.84	26.61	776	5.03	39.9	19,894	4.85	27.11
1998	21,429	5.42	32.03	750	4.86	44.77	22,179	5.4	32.51
1999	23,020	5.83	37.86	765	4.96	49.73	23,785	5.79	38.30
2000	26,976	6.83	44.68	938	6.08	55.81	27,914	6.8	45.10
2001	20,265	5.13	49.81	687	4.45	60.26	20,952	5.1	50.21
2002	18,182	4.6	54.41	582	3.77	64.04	18,764	4.57	54.78
2003	19,959	5.05	59.47	553	3.59	67.62	20,512	5.00	59.77
2004	22,445	5.68	65.15	626	4.06	71.68	23,071	5.62	65.39
2005	25,147	6.36	71.51	599	3.88	75.57	25,746	6.27	71.66
2006	28,121	7.12	78.63	708	4.59	80.16	28,829	7.02	78.68
2007	31,238	7.91	86.53	928	6.02	86.18	32,166	7.83	86.52
2008	28,853	7.3	93.83	1,219	7.9	94.08	30,072	7.32	93.84
2009	24,365	6.17	100	913	5.92	100	25,278	6.16	100
Total	**395,145**	**100**		**15422**	**100**		**410,567**	**100**	

Table 4 M&A Sample Composition by Cultural Cluster

Panel A shows the cluster wise distribution of intra-cultural (Column 'No'), cross-cultural (Column 'Yes'), total (column 'Total') M&A deals, and Panel B shows completed (Column 'Yes'), failed (Column 'No') and total (column 'Total') M&A deals. Sub-column 'No.' shows the number of M&A deals, 'Col%' represents the percentage of M&A deals to the respective column total and 'Cum%' indicates the cumulative percentage of M&A deals.

Panel A

Culture Clusters	**Cross-Cultural Mergers and Acquisitions Deal (Cluster Wise)**								
	Intra-cultural			Cross-cultural			Total		
	No.	Col %	Cum %	No.	Col %	Cum %	No.	Col %	Cum %
Anglo	221,495	61.62	61.62	21,833	42.70	42.70	243,328	59.27	59.27
Confucian Asia	39,421	10.97	72.59	5,882	11.50	54.20	45,303	11.03	70.30
Latin Europe	31,042	8.64	81.23	7,181	14.05	68.25	38,223	9.31	79.61
Germanic Europe	24,626	6.85	88.08	9,540	18.66	86.91	34,166	8.32	87.93
Southern Asia	15,293	4.25	92.33	2,022	3.95	90.86	17,315	4.22	92.15
Nordic Europe	12,292	3.42	95.75	3,424	6.70	97.56	15,716	3.83	95.98
Eastern Europe	8,916	2.48	98.23	589	1.15	98.71	9,505	2.32	98.30
Latin America	5,212	1.45	99.68	411	0.80	99.51	5,623	1.37	99.67
Middle East	964	0.27	99.95	223	0.44	99.95	1,187	0.29	99.96
Sub-Saharan Africa	180	0.05	100	21	0.04	100	201	0.05	100
Total	359,441	100		51,126	100		410,567	100	

Panel B

Culture Clusters	**Completed Mergers and Acquisitions Deal (Cluster Wise)**								
	Completed			Withdrawn			Total		
	No.	Col %	Cum %	No.	Col %	Cum %	No.	Col %	Cum %
Anglo	233,336	59.05	59.05	9,992	64.79	64.79	243,328	59.26	59.26
Confucian Asia	43,154	10.92	69.97	2,149	13.93	78.72	45,303	11.03	70.29
Latin Europe	37,384	9.46	79.43	839	5.44	84.16	38,223	9.31	79.60
Germanic Europe	33,425	8.46	87.89	741	4.80	88.96	34,166	8.32	87.92
Southern Asia	16,301	4.13	92.02	1,014	6.58	95.54	17,315	4.22	92.14
Nordic Europe	15,465	3.91	95.93	251	1.63	97.17	15,716	3.83	95.97
Eastern Europe	9,312	2.36	98.29	193	1.25	98.42	9,505	2.32	98.29
Latin America	5,463	1.38	99.67	160	1.04	99.46	5,623	1.37	99.66
Middle East	1,109	0.28	99.95	78	0.51	99.97	1,187	0.29	99.95
Sub-Saharan Africa	196	0.05	100.00	5	0.03	100.00	201	0.05	100.00
Total	395,145	100		15,422	100		410,567	100	

Table 5 Cross Cultural Cluster M&A Activity

The table shows the matrix of M&A deals across 10 GLOBE culture clusters for the sample period (1990-2009). Panel A reports number of M&A deals and Panel shows the percentages. Acquirer culture clusters are listed in columns while target culture clusters are given in rows. The totals given in the right column and bottom row do not include intra-cultural M&A deals, thus showing cross-cultural deals to and from the specific culture cluster. The diagonal numbers shows the number of intra-culture cluster M&A deals while off-diagonal numbers shows the number of M&A deals in a particular culture-cluster pair.

Panel A

Culture Clusters	AN	CA	LE	GE	SA	NE	EE	LA	ME	SSA	Total cross cultural deals
Anglo (AN)	221,495	3,501	5,518	5,197	1,700	1,570	1,178	2,791	250	128	21,833
Confucian Asia (CA)	3,177	39,421	312	348	1,736	82	83	121	18	5	5,882
Latin Europe (LE)	2,892	397	31,042	1,636	231	310	528	977	196	14	7,181
Germanic Europe (GE)	3,610	549	2,728	24,626	368	771	1,017	334	156	7	9,540
Southern Asia (SA)	892	822	84	109	15,293	26	27	37	18	7	2,022
Nordic Europe (NE)	1,268	158	574	849	100	12,292	353	93	24	5	3,424
Eastern Europe (EE)	200	29	106	154	17	34	8,916	5	44	0	589
Latin America (LA)	265	9	99	16	11	0	4	5,212	6	1	411
Middle East (ME)	77	7	39	46	26	2	20	5	964	1	223
Sub-Sahara Africa (SSA)	16	0	2	2	1	0	0	0	0	180	21
Total cross-culture deals	12,397	5,472	9,462	8,357	4,190	2,795	3,210	4,363	712	168	51,126

Panel B

Culture Clusters	AN	CA	LE	GE	SA	NE	EE	LA	ME	SSA	% All cross cultural deals
Anglo (AN)	91.03	1.44	2.27	2.14	0.70	0.65	0.48	1.15	0.10	0.05	42.70
Confucian Asia (CA)	7.01	87.02	0.69	0.77	3.83	0.18	0.18	0.27	0.04	0.01	11.50
Latin Europe (LE)	7.57	1.04	81.21	4.28	0.60	0.81	1.38	2.56	0.51	0.04	14.05
Germanic Europe (GE)	10.57	1.61	7.98	72.08	1.08	2.26	2.98	0.98	0.46	0.02	18.66
Southern Asia (SA)	5.15	4.75	0.49	0.63	88.32	0.15	0.16	0.21	0.10	0.04	3.95
Nordic Europe (NE)	8.07	1.01	3.65	5.40	0.64	78.21	2.25	0.59	0.15	0.03	6.70
Eastern Europe (EE)	2.10	0.31	1.12	1.62	0.18	0.36	93.80	0.05	0.46	0.00	1.15
Latin America (LA)	4.71	0.16	1.76	0.28	0.20	0.00	0.07	92.69	0.11	0.02	0.80
Middle East (ME)	6.49	0.59	3.29	3.88	2.19	0.17	1.68	0.42	81.21	0.08	0.44
Sub-Sahara Africa (SSA)	7.96	0.00	1.00	1.00	0.50	0.00	0.00	0.00	0.00	89.55	0.04
% All cross-cultural deals	24.25	10.70	18.51	16.35	8.20	5.47	6.28	8.53	1.39	0.33	100

Table 6 – Variable Descriptive statistics
The table reports the means, standard deviations, minimum, maximum and number of observations of the all the variables used in this study. The data on dependent variables is obtained from SDC, on variables of interest from House et al. (2004) and on control variables from different data sources. The definition of each variable and data source is given in Appendix-2.

	Mean	Standard Deviation	Minimum	Maximum	Observations
Dependent Variables:					
Completed M&A Deals	0.96	0.19	0.00	1.00	410567
Cross Cultural M&A Deals	0.13	0.33	0.00	1.00	410567
Variables of Interest:					
Performance Orientation	5.94	0.27	5.17	6.58	410567
Future Orientation	5.27	0.26	4.33	6.20	410567
Gender Egalitarianism	4.85	0.38	3.18	5.17	410567
Assertiveness	4.07	0.62	2.66	5.56	410567
Institutional Collectivism	4.37	0.34	3.83	5.65	410567
In-group Collectivism	5.63	0.26	4.94	6.52	410567
Power Distance	2.77	0.19	2.04	3.53	410567
Human Orientation	5.51	0.15	4.49	6.09	410567
Uncertainty Avoidance	4.13	0.41	2.82	5.61	410567
Control Variables:					
Firm & Deal Characteristics					
Firm Size	2.73	1.14	0.04	7.51	145558
Private Acquirers	0.35	0.48	0.00	1.00	410567
Private Targets	0.49	0.50	0.00	1.00	410567
Same Industry	0.46	0.50	0.00	1.00	410567
Cash Only	0.18	0.38	0.00	1.00	410567
Financial Acquirer	0.34	0.47	0.00	1.00	410567
Friendly M&A Deals	0.92	0.27	0.00	1.00	410567
Country Level Characteristics					
Acq. Nation GDP	12.26	0.91	0.00	13.16	410567
Target Nation GDP	12.24	0.86	0.00	13.16	410567
Acq. Nation GDP Growth	2.77	2.87	-17.67	33.99	410494
Target Nation GDP Growth	2.83	2.99	-17.67	33.99	410503
Acq. Nation GDP Per Capita	4.36	0.40	0.00	4.90	410559
Target Nation GDP Per Capita	4.33	0.42	0.00	4.90	410564
Acq. Nation Openness	58.62	62.83	13.75	445.91	410567
Target Nation Openness	57.42	58.58	13.75	445.91	410560
Acq. Nation Investment Profile	9.78	2.24	1.00	12.00	410265
Target Nation Investment Profile	9.68	2.27	1.00	12.00	410152
Acq. Nation Quality of Institutions	13.35	2.15	2.33	16.00	410265
Target Nation Quality of Institutions	13.17	2.32	2.33	16.00	410152

Acq. Nation Anti Self Dealing Index	0.62	0.21	0.08	1.00	410009
Acq. Nation Disclosure Quality	70.31	6.28	24.00	83.00	382448
Country Pair Characteristics					
Real Interest Rate	-0.05	1.52	-9.92	9.92	378260
Corporate Tax Difference	0.00	0.05	-0.35	0.35	410567
Exchange Rate Volatility	0.59	8.46	0.00	293.51	406391
Culture Distance	0.14	0.36	0.00	4.20	410246
Same Legal Origin	0.89	0.32	0.00	1.00	410567
Same Language	0.86	0.35	0.00	1.00	410567
Same Religion	0.84	0.37	0.00	1.00	410567
Share Border	0.05	0.22	0.00	1.00	410525
Cluster Level Characteristics					
Culture Cluster Size	0.27	0.14	0.00	0.41	410567
Culture Cluster Geographical Dispersion	3.48	0.46	2.50	3.82	410567
Cultural Diversity	0.71	0.17	0.32	1.41	410567
Other Control					
Europe Dummy	0.33	0.47	0.00	1.00	410567

Table 7 - Probability of Cross-Cultural M&A Deals

Panel A – Deal Level Analysis

Panel A of the table reports the regression estimates of cross-cultural M&A deals of Probit models on three factor analyzed cultural dimensions of GLOBE study. Cross-cultural M&A deals dummy is equal to 1 if the acquirer chooses its target outside from its own culture cluster and 0 otherwise. Variables of interest are the scores of factor-analyzed cultural dimensions of GLOBE study. The details of control variables are given in Appendix-2 (Variable Definitions). Model 1 represents the result for all M&A deals of our sample; Model 2 & 3 represents the result for the M&A deals above deal value equal or above $1 Million and $100 Million respectively and Model 4 represents the results for M&A deals when the acquirers own less than 50% before M&A deals and above 50% after the deal. Standard errors are clustered at firm level. *, **, *** indicate the significance at 10%, 5% and 1% respectively.

	All		Deal Value Equal or above 1Mn		Deal Value Equal or above 100Mn		Change of Control Deals	
	1		2		3		4	
	Coef.	P-value	Coef.	P-value	Coef.	P-value	*Coef.*	*P-value*
Variables of Interest:								
Result Oriented	***-0.207	0.000	***-0.179	0.000	***-0.279	0.000	***-0.245	0.000
Traditional Oriented	***-0.354	0.000	***-0.412	0.000	***-0.398	0.000	***-0.512	0.000
People Oriented	***0.147	0.000	***0.192	0.000	**0.150	0.041	***0.256	0.000
Control Variables:								
Acq. Nation GDP	0.038	0.162	*0.050	0.091	0.029	0.624	*0.068	0.084
Target Nation GDP	-0.029	0.193	-0.038	0.181	0.032	0.532	***-0.090	0.006
Acq. Nation GDP Growth	***0.054	0.000	***0.054	0.000	***0.054	0.001	***0.083	0.000
Target Nation GDP Growth	***-0.019	0.001	**-0.018	0.016	-0.018	0.207	***-0.049	0.000
Acq. Nation GDP Per Capita	0.075	0.326	0.058	0.515	0.102	0.537	0.012	0.910
Target Nation GDP Per Capita	***-0.427	0.000	***-0.533	0.000	***-0.462	0.002	***-0.429	0.000
Acq. Nation Openness	*-0.001	0.069	0.000	0.950	0.001	0.371	-0.001	0.323
Target Nation Openness	***0.005	0.000	***0.004	0.000	***0.004	0.000	***0.005	0.000
Acq. Nation Investment Profile	**-0.033	0.023	***-0.053	0.005	***-0.079	0.010	***-0.069	0.001
Target Nation Investment Profile	**-0.031	0.024	**-0.042	0.013	*-0.049	0.098	***-0.055	0.006
Acq. Nation Quality of Institutions	***0.050	0.000	***0.047	0.008	0.030	0.327	*0.037	0.084
Target Nation Quality of Institutions	***-0.104	0.000	***-0.073	0.000	-0.036	0.107	***-0.099	0.000
Acq. Nation Anti Self Dealing Index	-0.143	0.196	**-0.326	0.025	-0.108	0.642	*-0.345	0.050
Acq. Nation Disclosure Quality	***-0.008	0.001	***-0.019	0.000	***-0.018	0.000	***-0.027	0.000
Real Interest Rate	***-0.071	0.000	***-0.087	0.000	***-0.055	0.000	***-0.085	0.000
Corporate Tax Difference	*0.421	0.076	-0.163	0.559	*0.868	0.058	0.215	0.463
Exchange Rate Volatility	***0.018	0.000	***0.014	0.000	***0.018	0.001	***0.022	0.000
Firm Size	***0.321	0.000	***0.294	0.000	***0.303	0.000	***0.293	0.000
Private Acquirers	-0.004	0.942	0.076	0.278	-0.016	0.904	0.091	0.305
Private Targets	***0.036	0.006	***0.100	0.000	***0.119	0.002	***0.065	0.001
Same Industry	***0.068	0.000	***0.066	0.000	***0.103	0.004	*0.038	0.052
Cash Only	-0.004	0.809	0.018	0.269	***0.142	0.000	*0.035	0.071
Financial Acquirer	**-0.369	0.036	**-0.455	0.041	-0.378	0.350	**-0.598	0.020
Friendly M&A Deals	***0.142	0.000	***0.156	0.000	*0.096	0.089	***0.192	0.005
Culture Cluster Size	***-0.852	0.000	***-1.108	0.000	***-1.585	0.000	***-1.282	0.000
Europe Dummy	***0.514	0.000	***0.632	0.000	***0.664	0.000	***0.632	0.000
Time Fixed Effects		Yes		Yes		Yes		Yes
Industry Fixed Effects		Yes		Yes		Yes		Yes
Pseudo-R-Squared		0.244		0.257		0.292		0.293
Log Likelihood		-38682.813		-19792.463		-4892.121		-13432.952
Observations		129454		74096		16287		56120

Panel B – Country Level Analysis

The table reports the Tobit regression models of cross-cultural M&A deals at country level on three factor analyzed cultural dimensions of GLOBE study. Cross-cultural M&A deals are the proportion of cross-cultural M&A deals to total M&A activity by acquirer country in year *t*. Variables of interest are the scores of nine cultural dimensions of GLOBE study (House et al.: 2004). The details of control variables are given in Appendix-2 (Variable Definitions). Model 1 represents the result for all M&A deals of our sample; Model 2 & 3 represents the result for the M&A deals above deal value $1 Million and $100 Million respectively and Model 4 represents the results for M&A deals when the acquirers own less than 50% before M&A deals and above 50% after the deal. Column 1 to 4 reports the results from Tobit model regressions.*, **, *** indicate the significance at 10%, 5% and 1% respectively.

	All		Deal Value Equal or above 1Mn		Deal Value Equal or above 100Mn		Change of Control Deals	
	1		2		3		4	
	Coef.	*P-value*	*Coef.*	*P-value*	*Coef.*	*P-value*	*Coef.*	*P-value*
Variables of Interest:								
Result Oriented	***-0.223	0.000	***-0.314	0.000	***-0.286	0.000	***-0.355	0.000
Traditional Oriented	***-0.059	0.001	***-0.114	0.000	***-0.127	0.001	***-0.127	0.000
People Oriented	**0.041	0.047	*0.050	0.070	**0.109	0.013	**0.067	0.043
Control Variables:								
Acq. Nation GDP	***-0.046	0.000	***-0.042	0.000	-0.014	0.302	***-0.054	0.000
Acq. Nation GDP Growth	0.002	0.190	-0.001	0.675	0.000	0.973	-0.000	0.847
Acq. Nation GDP Per Capita	0.026	0.147	0.002	0.935	-0.029	0.413	0.005	0.855
Acq. Culture Cluster Size	**-0.151	0.013	***-0.305	0.126	(0.000)	0.286	***-0.447	0.000
Acq. Nation Openness	0.000	0.520	0.000	0.730	**0.000	0.014	-0.000	0.982
Acq. Nation Investment Profile	**0.007	0.031	*0.009	0.058	-0.004	0.621	**0.012	0.030
Acq. Nation Quality of Institutions	-0.005	0.172	0.002	0.699	*0.013	0.074	0.000	0.945
Acq. Nation Anti Self-Dealing Index	-0.019	0.536	-0.061	0.142	***-0.194	0.003	0.005	0.924
Time Fixed Effects		Yes		Yes		Yes		Yes
Pseudo-R-Squared		3.477		1.069		0.348		0.650
Log Likelihood		250.141		14.850		-249.914		-114.258
Observations		926		885		769		862
M&A Deals Included		410567		185691		34546		123989

Table 8 – Probability of Cross-Cultural M&A Deals

The table reports the regression estimates of cross-cultural M&A deals from Probit models on nine cultural dimensions of GLOBE study. Cross-cultural M&A deal is a dummy variable and is equal to 1 if the acquirer chooses its target outside from its own culture cluster and 0 otherwise. Variables of interest are the scores of nine cultural dimensions of GLOBE study (House et al.: 2004). The details of control variables are given in Appendix-2 (Variable Definitions). Model 1 presents the results for all M&A deals of our sample; Model 2 & 3 presents the results for the M&A deals equal or above deal value $1 Million and $100 Million respectively and Model 4 presents the results for M&A deals when the acquirers own less than 50% before M&A deals and above 50% after the deal. Standard errors are clustered at firm level. *, **, *** indicate the significance at 10%, 5% and 1% respectively.

	All		Deal Value Equal or above 1Mn		Deal Value Equal or above 100Mn		Change of Control Deals	
	1		2		3		4	
	Coef.	*P-value*	*Coef.*	*P-value*	*Coef.*	*P-value*	*Coef.*	*P-value*
Performance Orientation	***-0.655	0.000	-0.561***	0.000	***-0.855	0.000	***-0.916	0.000
Future Orientation	-0.024	0.827	0.068	0.627	0.337	0.153	0.194	0.271
Gender Egalitarianism	**0.164	0.023	*0.155	0.074	0.216	0.158	***0.370	0.001
Assertiveness	***-0.300	0.000	***-0.378	0.000	***-0.490	0.000	***-0.594	0.000
Institutional Collectivism	***-0.265	0.001	-0.076	0.464	**-0.432	0.023	**-0.270	0.032
In-group Collectivism	-0.065	0.456	**-0.255	0.021	**-0.368	0.045	***-0.376	0.009
Power Distance	0.010	0.942	*0.339	0.052	0.219	0.446	0.299	0.158
Human Orientation	***0.703	0.000	***0.792	0.000	***0.792	0.007	***1.285	0.000
Uncertainty Avoidance	***-0.347	0.000	***-0.698	0.000	**-0.388	0.023	***-0.501	0.000
Culture Cluster Size	***-1.128	0.000	***-1.976	0.000	***-2.320	0.000	***-2.389	0.000
Control Variables		Yes		Yes		Yes		Yes
Time Fixed Effects		Yes		Yes		Yes		Yes
Industry Fixed Effects		Yes		Yes		Yes		Yes
Pseudo-R-Squared		0.246		0.262		0.296		0.300
Log Likelihood		-38585.424		-19651.882		-4869.991		-13303.03
Observations		129454		74096		16287		56120

Table 9 - Probability of Cross-Cultural M&A Deals – Robustness Checks

Panel A and B of the table report the regression estimates of cross-cultural M&A deals of Probit models on three factor analyzed cultural dimensions of GLOBE study. Cross-cultural M&A deals dummy is equal to 1 if the acquirer chooses its target outside from its own culture cluster and 0 otherwise. Variables of interest are the scores of factor-analyzed cultural dimensions of the GLOBE study. The details of control variables are given in Appendix-2 (Variable Definitions). Standard errors are clustered at firm level. *, **, *** indicate the significance at 10%, 5% and 1% respectively.

Panel A – Different Sample Specifications

	Completed Deals Only		Non USA		Non Anglo		First Deal Only by Firm		Cross-Border Deals	
	1		2		3		4		5	
	Coef.	*P-value*	*Coef.*	*P-value*	*Coef.*	*P-value*	*Coef.*	*P-value*	*Coef.*	*P-value*
Variables of Interest:										
Result Oriented	***-0.205	0.000	***-0.218	0.000	***-0.246	0.000	***-0.156	0.000	***-0.441	0.000
Traditional Oriented	***-0.357	0.000	***-0.290	0.000	***-0.228	0.000	***-0.273	0.000	***-0.422	0.000
People Oriented	***0.142	0.000	***0.131	0.000	***0.130	0.000	***0.132	0.000	**0.116	0.035
Control Variables		Yes		Yes		Yes		Yes		Yes
Time Fixed Effects		Yes		Yes		Yes		Yes		Yes
Industry Fixed Effects		Yes		Yes		Yes		Yes		Yes
Pseudo-R-Squared		0.245		0.204		0.24		0.185		0.212
Log Likelihood		-37333.412		-27371.91		-17994.689		-6592.315		-8872.998
Observations		124,142		71,148		42,957		25,113		16,287

Panel B – Additional Control Variables

	Cultural Diversity		Geographical Dispersion		Cultural Distance		Additional Controls	
	1		2		3		4	
	Coef.	*P-value*	*Coef.*	*P-value*	*Coef.*	*P-value*	*Coef.*	*P-value*
Variables of Interest:								
Result Oriented	***-0.217	0.000	***-0.237	0.000	***-0.159	-0.001	***-0.190	0.000
Traditional Oriented	***-0.343	0.000	***-0.402	0.000	***-0.791	0.000	***-0.179	0.009
People Oriented	***0.145	0.000	***0.159	0.000	***0.336	0.000	***0.371	0.000
Additional Control Variables:								
Cultural Diversity	-0.087	0.477						
Culture Cluster Geographical Dispersion			***0.312	0.001				
Cultural Distance					***5.857	0.000		
Same Legal Origin							***-0.964	0.000
Same Language							***-3.608	0.000
Same Religion							***-1.409	0.000
Share Border							***-2.124	0.000
Control Variables		Yes		Yes		Yes		Yes
Time Fixed Effects		Yes		Yes		Yes		Yes
Industry Fixed Effects		Yes		Yes		Yes		Yes
Pseudo-R-Squared		0.244		0.245		0.795		0.869
Log Likelihood		-38682.036		-38666.63		-10443.041		-6729.647
Observations		129,454		129,454		129,296		129,452

Table 10- Probability of M&A Deal Completion

Panel A – Deal Level Analysis

Panel A of the table reports the regression estimates of completed M&A deals for the Probit model on three factor based cultural dimensions of GLOBE study. Completed M&A deal is a dummy variable and is equal to 1 if the M&A deal is 'completed' and 0if 'withdrawn'. Variables of interest are the scores of three factor analyzed cultural dimensions of the GLOBE study (House et al.: 2004). The details of control variables are given in Appendix-2 (Variable Definitions). Column 1 & 2 presents the results for full sample while column 3 & 4 presents the results for the M&A deals above deal value $1 Million. Standard errors are clustered at firm level. *, **, *** indicate the significance at 10%, 5% and 1% respectively.

	All				Deal Value Equal or above 1Mn			
	1				2			
	Coef.	*P-value*	*Coef.*	*P-value*	*Coef.*	*P-value*	*Coef.*	*P-value*
Variables of Interest								
Result Oriented	***-0.222	0.000	***-0.224	0.000	***-0.289	0.000	***-0.292	0.000
Traditional Oriented	***-0.154	0.000	***-0.154	0.000	***-0.184	0.000	***-0.182	0.000
People Oriented	***0.085	0.006	***0.084	0.007	**0.089	0.016	**0.087	0.018
Control Variables								
Acq. Nation GDP	**0.062	0.016	**0.065	0.014	0.047	0.174	0.049	0.153
Target Nation GDP	-0.016	0.473	-0.016	0.494	-0.01	0.734	-0.009	0.755
Acq. Nation GDP Growth	-0.005	0.387	-0.005	0.460	-0.004	0.554	-0.003	0.668
Target Nation GDP Growth	-0.003	0.579	-0.004	0.484	-0.008	0.236	-0.009	0.173
Acq. Nation GDP Per Capita	-0.058	0.399	-0.062	0.377	-0.107	0.216	-0.111	0.204
Target Nation GDP Per Capita	-0.065	0.282	-0.065	0.285	-0.077	0.288	-0.077	0.292
Acq. Nation Openness	***-0.001	0.000	***-0.001	0.000	***-0.002	0.000	***-0.002	0.000
Target Nation Openness	0.000	0.172	0.000	0.121	0.000	0.572	0.000	0.475
Acq. Nation Investment Profile	*-0.028	0.072	*-0.029	0.066	-0.013	0.51	-0.014	0.468
Target Nation Investment Profile	***0.037	0.008	***0.038	0.007	0.029	0.101	*0.031	0.088
Acq. Nation Quality of Institutions	*-0.026	0.059	*-0.026	0.059	*-0.030	0.079	*-0.031	0.081
Target Nation Quality of Institutions	0.001	0.954	0.000	0.979	-0.004	0.736	-0.005	0.717
Acq. Nation Anti Self Dealing Index	-0.048	0.495	-0.06	0.393	***0.267	0.002	***0.252	0.004
Acq. Nation Disclosure Quality	0.002	0.437	0.002	0.397	-0.003	0.364	-0.003	0.395
Real Interest Rate	**-0.015	0.026	**-0.015	0.025	*-0.016	0.058	*-0.016	0.059
Corporate Tax Difference	-0.155	0.454	-0.166	0.431	-0.344	0.212	-0.344	0.222
Exchange Rate Volatility	*-0.001	0.083	*-0.001	0.083	0.001	0.588	0.001	0.598
Firm Size	***0.129	0.000	***0.128	0.000	***0.126	0.000	***0.125	0.000
Private Acquirers	***0.237	0.000	***0.237	0.000	***0.257	0.002	***0.257	0.002
Private Targets	***0.432	0.000	***0.432	0.000	***0.420	0.000	***0.420	0.000
Same Industry	***-0.045	0.003	***-0.045	0.003	-0.021	0.262	-0.021	0.271
Cash Only	***0.202	0.000	***0.202	0.000	***0.224	0.000	***0.223	0.000
Financial Acquirer	***-0.067	0.001	***-0.064	0.002	*-0.041	0.094	-0.037	0.131
Friendly M&A Deals	***0.535	0.000	***0.535	0.000	***0.634	0.000	***0.634	0.000
Cross Cultural M&A Deals	**0.058	0.024			**0.072	0.038		
Geographical Proximity			***0.015	0.006			***0.019	0.007
Time Fixed Effects		Yes		Yes		Yes		Yes
Pseudo-R-Squared		0.074		0.074		0.083		0.083
Log Likelihood		-20506.254		-20505.117		-12647.166		-12645.776
Observations		129592		129592		74208		74208

Panel B – Country Level Analysis

Panel B of the table reports the regression estimates of completed M&A deals of Tobit models on three factor analyzed cultural dimensions of GLOBE study. Completed M&A deals are the proportion of M&A deals completed to total M&A activity by acquirer country in year *t*. Variables of interest are the scores of three factor analyzed cultural dimensions of the GLOBE study (House et al.: 2004). The details of control variables are given in Appendix-2 (Variable Definitions). Column 1 and 2 presents the results for full sample and sub-sample for M&A deals with deal value equal or above 1 Million dollar from tobit model. *, **, *** indicate the significance at 10%, 5% and 1% respectively with p-value in brackets.

	All		Deal Value Equal or above 1Mn	
	1		2	
	Coef.	*P-value*	*Coef.*	*P-value*
Variables of Interest:				
Result Oriented	-0.009	(0.517)	**-0.037	(0.041)
Traditional Oriented	-0.000	(0.994)	0.020	(0.208)
People Oriented	0.011	(0.493)	***0.051	(0.007)
Control Variables:				
Acq. Nation GDP	***-0.018	(0.000)	***-0.019	(0.000)
Acq. Nation GDP Growth	-0.001	(0.598)	-0.002	(0.251)
Acq. Nation GDP Per Capita	***0.032	(0.003)	**0.033	(0.011)
Acq. Nation Openness	***-0.000	(0.002)	***-0.000	(0.000)
Acq. Nation Investment Profile	***-0.008	(0.002)	*-0.006	(0.068)
Acq. Nation Quality of Institutions	0.001	(0.646)	-0.001	(0.815)
Acq. Nation Anti Self-Dealing Index	-0.006	(0.746)	-0.007	(0.719)
Acq. Nation Disclosure Quality	**-0.001	(0.033)	***-0.001	(0.006)
Acq. Nation Real Interest Rate	***0.003	(0.006)	0.001	(0.645)
Time Fixed Effects		Yes		Yes
Pseudo-R-Squared		-0.185		-0.276
Log Likelihood		433.181		287.297
Observations		555		546

Table 11 - Probability of M&A Deal Completion

The table reports the regression estimates of completed M&A deals of Probit models on nine cultural dimensions of GLOBE study. Completed M&A deal is a dummy variable and is equal to 1 if the M&A deal is 'completed' and 0 if 'withdrawn'. Variables of interest are the scores of nine cultural dimensions of the GLOBE study (House et al.: 2004). The details of control variables are given in Appendix-2 (Variable Definitions). Column 1 & 2 presents the results for full sample while column 3 & 4 presents the results for the M&A deals equal or above deal value $1 Million. Standard errors are clustered at firm level. *, **, *** indicate the significance at 10%, 5% and 1% respectively.

	All				Deal Value Equal or above 1Mn			
	1				2			
	Coef.	*P-value*	*Coef.*	*P-value*	*Coef.*	*P-value*	*Coef.*	*P-value*
Variables of Interest								
Performance Orientation	-0.008	0.927	-0.010	-0.903	***-0.380	0.000	***-0.384	0.000
Future Orientation	***-0.704	0.000	***-0.706	0.000	***-0.405	0.001	***-0.411	0.001
Gender Egalitarianism	-0.018	0.805	-0.02	0.783	**0.233	0.011	**0.228	0.013
Assertiveness	0.015	0.710	0.015	0.704	-0.030	0.547	-0.030	0.546
Institutional Collectivism	**-0.173	0.049	*-0.167	0.057	***-0.346	0.002	***-0.334	0.002
In-group Collectivism	*-0.173	0.065	*-0.175	0.062	**-0.267	0.033	**-0.270	0.030
Power Distance	***-0.979	0.000	***-0.972	0.000	***-1.257	0.000	***-1.247	0.000
Human Orientation	-0.037	0.774	-0.038	0.767	0.056	0.732	0.054	0.742
Uncertainty Avoidance	***0.390	0.000	***0.386	0.000	***0.645	0.000	***0.635	0.000
Cross Cultural M&A Deals	**0.055	0.034			**0.089	0.014		
Geographical Proximity			**0.013	0.015			***0.018	0.010
Control Variables		Yes		Yes		Yes		Yes
Time Fixed Effects		Yes		Yes		Yes		Yes
Pseudo-R-Squared		0.078		0.078		0.091		0.091
Log Likelihood		-20417.482		-20416.862		-12545.258		-12545.298
Observations		129592		129592		74208		74208

Table 12 - Probability of M&A Deal Completion – Robustness Checks

Panel A and B of the table reports the regression estimates of completed M&A deals of Probit model three factor analyzed cultural dimensions of GLOBE study. Completed M&A deal is a dummy variable and is equal to 1 if the M&A deal is 'completed' and 0 if 'withdrawn'. Variables of interest are the scores of three factor analyzed cultural dimensions of the GLOBE study (House et al.: 2004). The details of control variables are given in Appendix-2 (Variable Definitions). Standard errors are clustered at firm level. *, **, *** indicate the significance at 10%, 5% and 1% respectively.

Panel A – Different Sample Specification

	Non US		First Deal Only by Firm	
	1		2	
	Coef.	*P-value*	*Coef.*	*P-value*
Variables of Interest				
Result Oriented	***-0.204	0.000	***-0.273	0.000
Traditional Oriented	***-0.146	0.000	***-0.143	0.003
People Oriented	**0.076	0.015	***0.138	0.005
Control Variables		Yes		Yes
Time Fixed Effects		Yes		Yes
Pseudo-R-Squared		0.077		0.068
Log Likelihood		-11076.539		-5269.475
Observations		71186		25198

Panel B – Additional Control Variables

	Cultural Distance		Additional Controls	
	1		2	
	Coef.	*P-value*	*Coef.*	*P-value*
Variables of Interest				
Result Oriented	***-0.225	0.000	***-0.218	0.000
Traditional Oriented	***-0.152	0.000	***-0.152	0.000
People Oriented	***0.084	0.008	***0.084	0.007
Additional Controls				
Cultural Distance	-0.004	0.912		
Same Legal Origin			0.031	0.557
Same Language			**-0.112	0.027
Same Religion			0.065	0.122
Share Border			-0.019	0.612
Control Variables		Yes		Yes
Time Fixed Effects		Yes		Yes
Pseudo-R-Squared		0.074		0.075
Log Likelihood		-20488.743		-20492.692
Observations		129434		129590

Appendices

Appendix 1:

Culture Clusters	Countries
Anglo	Australia, Canada, England, Ireland, New Zealand, South Africa - (White Sample), United States
Latin America	Argentina, Bolivia, Brazil, Colombia, Costa Rica, El Salvador, Guatemala, Mexico, Venezuela
Eastern Europe	Albania, Georgia, Greece, Hungary, Kazakhstan, Poland, Russia, Slovenia
Latin Europe	France, Israel, Italy, Portugal, Spain, Switzerland - (French Speaking)
Germanic Europe	Austria, Germany, Netherlands, Switzerland -(German Speaking)
Southern Asia	India, Indonesia, Iran, Malaysia, Philippines, Thailand
Sub-Sahara Africa	Namibia, Nigeria , South Africa -(Black Sample), Zambia, Zimbabwe
Confucian Asia	China, Hong Kong, Japan, Singapore, South Korea, Taiwan
Middle East	Egypt, Kuwait, Morocco, Qatar, Turkey
Nordic Europe	Denmark, Finland, Sweden

Appendix 2:

Variable Definitions

Variables Name	Definition
Dependent Variables	
Cross-Cultural M&A Deals (Deal Level)	Binary variable, takes value 1 if acquirer firm from specific culture cluster chooses its targets from different culture clusters and 0 otherwise.) (Source: SDC Mergers & Corporate Transaction Database)
Cross-Cultural M&A Deals (Country Level)	Percentage of cross-cultural M&A deals to the total M&A activity by each country in year *t*. (Source: SDC Mergers & Corporate Transaction Database)
Completion of M&A Deals (Deal Level)	Binary variable, takes value 1 if SDC records M&A deal status as 'completed' and 0 if 'withdrawn') (Source: SDC Mergers & Corporate Transaction Database)
Completed M&A Deals (Country Level)	Percentage of completed M&A deals to the total M&A activity by each country in year *t*. (Source: SDC Mergers & Corporate Transaction Database)
Variables of Interest:	
GLOBE Nine Cultural Dimensions	
Performance Orientation	Society performance orientation score. (Source: House et al.: 2004)
Future Orientation	Society future orientation score. (Source: House et al.: 2004)
Gender Egalitarianism	Society gender egalitarianism score. (Source: House et al.: 2004)
Assertiveness	Society assertiveness score. (Source: House et al.:.2004)
Institutional Collectivism	Society institutional collectivism score. (Source: House et al.: 2004)
In-group Collectivism	Society in-group collectivism score. (Source: House et al.: 2004)
Power Distance	Society power distance score. (Source: House et al.: 2004)
Human Orientation	Society human orientation score. (Source: House et al.: 2004)
Uncertainty Avoidance	Society uncertainty avoidance score. (Source: House et al.: 2004)
Control Variables:	
Firm and Deal Characteristics	
Public Acquirer (Target)	Acquirer or target is public if public status of the firm is "Public". (Source: SDC Mergers & Corporate Transaction Database)
Private Acquirer (Target)	Acquirer or target is private if public status of the firm is "Private". (Source: SDC Mergers & Corporate Transaction Database)
Firm Size	Logarithm of dollar value of total assets of acquirer firms. (Source: Compustat Global)
Cash Only	It is a dummy variable equal to one if the payment is made with all cash in the merger and 0 otherwise. (Source: SDC Mergers & Corporate Transaction Database).
Same Industry	It is a dummy variable equal to one if the merger is made in the same industry and 0 otherwise. (Source: SDC Mergers & Corporate Transaction Database).
Financial Acquirer	It is dummy variable equal to 1 if SDC reports the acquirer as financial acquirer and 0 otherwise. (Source: SDC Mergers & Corporate Transaction Database).
Friendly M&A Deals	It is a dummy variable equal to 1 if SDC report attitude of M&A deal as "Friendly" and 0 otherwise. (Source: SDC Mergers & Corporate Transaction Database)
Country Level Characteristics	
Acq. Nation Per Capita GDP	Logarithm of annual gross domestic product per capita of the acquirer countries (in US Dollars) (Source: World Bank Development Indicators)
Target Nation Per Capita GDP	Logarithm of annual gross domestic product per capita of the target countries (in US Dollars) (Source: World Bank Development Indicators)
Acq. Nation GDP	Logarithm of annual gross domestic product (GDP) of the acquirer countries (in US Dollars) (Source: World Bank Development Indicators)

Target Nation GDP	Logarithm of annual gross domestic product (GDP) of the target countries (in US Dollars) (Source: World Bank Development Indicators)
Acq. Nation GDP Growth	Annual growth rate of GDP of the acquirer countries. (Source: World Bank Development Indicators)
Target Nation GDP Growth	Annual growth rate of GDP of the target countries. (Source: World Bank Development Indicators)
Acq. Nation Openness	Sum of exports and imports of goods and services as share of GDP of acquirer countries. (Source: World Bank Development Indicators)
Target Nation Openness	Sum of exports and imports of goods and services as share of GDP of target countries. (Source: World Bank Development Indicators)
Acq. Nation Real Interest Rate	The real interest rate of the acquirer countries. (Source: World Bank Development Indicators)
Investment Profile	It is measured by adding three sub-components of the political risk ratings of International Country Risk Guide (ICRG). Subcomponents include (i) risk of expropriation or contract viability (ii) payment delays and (iii) repatriation of profits. Each subcomponent is scaled from zero (very high risk) to four (very low risk). (Source: ICRG Guide)
Quality of Institutions	It is measured by adding three sub-components corruption, law & order and bureaucratic quality of political risk ratings of International Country Risk Guide (ICRG). Each subcomponent is scaled from zero (very high risk) to four (very low risk). (Source: ICRG Guide)
Anti Self-Dealing Index	It is a survey-based index created to measure of the legal protection of minority shareholders against expropriation by corporate insiders of acquirer nation. Source (DLLS (1998))
Disclosure Quality	It is the index created to measure the quality of disclosure of accounting information of the companies' 1990 annual reports of acquirer nation by International Accounting and Auditing Trends, Center for International Financial Analysis &Research, Inc. (Source: La Porta et al. (1997,1998)
Europe dummy	Dummy variable equal to 1 if acquirer country is a member of the European union and 0 otherwise.
Country Pair Characteristics	
Real Interest Rate	The difference between real interest rate of acquirer country and target country. (Source: World Bank Development Indicators)
Exchange Rate Volatility	Standard deviation of the exchange rates between acquirer county and target country from 36 months upto 1month prior to deal announced date. (Source: DataStream)
Geographical Proximity	The geographic distance between capital cities of acquirer and target countries and is calculated using great-circle distance formula which uses the longitude and latitude of the countries. (www.mapsofworld.com)
Same Legal Origin	It is a dummy variable equal to 1 if acquirer and target countries legal origin is same and 0 otherwise. (Source: La Porta et al. (1998)
Same Language	It is a dummy variable equal to 1 if acquirer and target countries primary language is same and 0 otherwise. (Source: CIA World Factbook 2014).
Same Religion	It is a dummy variable equal to 1 if acquirer and target countries primary religion is same and 0 otherwise. (Source: CIA World Factbook 2014).
Culture Distance	Culture distance is calculated as the Cartesian distance in the nine GLOBE culture dimensions between the acquirer and target countries. (Source: House et al.: 2004)
Share Border	It is a dummy variable equal to 1 if acquirer and target countries share border and 0 otherwise. (Source: CEPII).
Cluster Level Characteristics	
Acquirer Cluster Size	The sum of GDP of acquirer countries of a specific culture cluster as share of total GDP of all GLOBE countries. (Source: World Bank Development Indicators)
Culture Cluster Geographical Dispersion	The standard deviation of geographic distance between acquirer countries of specific culture cluster. The geographic distance between capital cities of acquirer and target countries and is calculated using great-circle distance formula which uses the longitude and latitude of the countries. (www.mapsofworld.com)
Culture Diversity	We measure cultural diversity as the centroid of cultural distance between acquirer countries of a GLOBE culture cluster. (Source: House et al.: 2004)

Target Countries' Culture and Mergers and Acquisitions Activity

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Abstract

I study the effects of culture on mergers and acquisitions activity from the target countries' perspective. I investigate in particular (i) which cultures are more likely to become targets (ii) how cultural values affect the shareholder value of target firms. Using the GLOBE culture framework, I find that firms from result oriented cultures are less likely to become targets and experience higher cumulative abnormal returns. Traditional oriented cultures are more likely to become targets and experience lower cumulative abnormal returns. There is a higher probability of firms from people oriented cultures becoming targets.

JEL Classification: G34, M14, Z1
Key Words: Mergers & Acquisitions (M&As), Cultural Values, Cumulative Abnormal Returns

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1. Introduction:

Recent research on the effects of national culture on international mergers and acquisitions (M&As) has highlighted the important role played by culture on the economic decision making of managers (see for example, Ahern et al. (2015), Frijns et al. (2013) and Ahmad et al. (2015)). The studies have particularly explored the effects of the cultural values of acquirer countries and cultural distance between acquirer and target countries on M&A activity. However, the effects of the cultural values of target countries' on M&A activity have not yet been investigated, despite evidence that target firms are active in initiating M&A transactions. For example, Aktas et al. (2010) and Aktas et al. (2016) document that 40% of US M&A transactions are target initiated. The evidences suggest that managers of target firms are not passive bystanders and they may play an equal role in M&A decisions. To approve or disapprove a merger, management of both acquirer and target firms determine the price and the shareholders of target firms validate the merger by voting. In this study, I unlock the important relationship between the cultural values of target countries on the outcomes of their M&A activity. I investigate in particular (i) which cultures are more likely to become targets. (ii) how cultural values affect the shareholder value of target firms.

The notion that culture affects mergers and acquisitions activity is supported by some recent financial studies. Ahern et al. (2015) measure culture using three dimensions (trust, individualism, and hierarchy). They provide strong evidence on the effects of cultural distance and cross-border merger volume and synergy gains. They find that cultural distance reduces the volume of cross-border mergers and affects cumulative abnormal returns negatively. Frijns et al. (2013) put forward the idea that countries emphasizing uncertainty avoidance engage in less diversifying international M&As. They further show a positive relationship between uncertainty avoidance and acquirer firms' cumulative abnormal returns. Ahmad et al. (2015) shift the view point from cross-border to cross-cultural M&As and identify acquirer cultures which are likely to accept greater cultural unfamiliarity while choosing targets. They show that result oriented and traditional oriented societies are less likely to undertake cross-cultural deals and people oriented societies are more likely to engage in cross-cultural transactions. These studies explain the role of culture on M&A activity either by considering the cultural distance between countries or investigating the cultural values of acquirer countries. However, we have no evidence on how the cultural values of target countries affect M&A outcomes.

To investigate the effects of culture on target countries' M&A activity, I use the recent and comprehensive GLOBE (Global Leadership and Organizational Behavioral Effectiveness) culture framework. To keep the integrity of culture typology, I do not cherry pick culture dimensions, but apply the complete typology of culture. There are several advantages of the GLOBE culture framework over other available culture studies. First, it constructs nine dimensions of culture which demonstrate all cultural aspects of the countries. It provides a score for each individual dimension which can be used in empirical settings. Leung et al. (2005) highlight that the GLOBE culture framework adds to the Hofstede (2001) culture study as it includes two additional dimensions (performance orientation and humane orientation) which have significant implications for international business. Furthermore, it clearly differentiates between cultural values and cultural practices and Ahern et al. (2015) argue that cultural values affect economic decision making.

I use the scores of nine culture dimensions of the GLOBE study from House et al. (2004). Hofstede (2006) argues that the GLOBE culture dimensions are correlated with each other and can cause a problem of multicollinearity. Following Ahmad et al. (2015), I factor analyze the dimensions using principal component analysis which yields three viable and statistically significant factors. I interpret these factors as: result oriented (individuals or groups focus on performance orientation and encourage familism); traditional oriented (individuals or groups show less tolerance for uncertain events, high long-term orientation, discourage gender equality and emphasize nationalism) and people oriented (individuals or groups encourage hierarchical egalitarianism, promote fairness, openness, helping and kind behavior in their dealings). I use the three culture factors in my main analyses and investigate their effects on the probability of firms' becoming targets and target firms' cumulative abnormal returns.

For the probability of firms becoming targets, I use large international sample of 38,796 listed firms and 335,445 firm-year observations, which represents the available universe of public firms. For the M&A sample, I use 12,027 M&A transactions by 9,375 firms. The sample is spread over 23 years (from 1990 to 2012) and across 39 GLOBE countries. I carry out a systematic analysis by first looking at the probability of firms becoming targets and then look at value creation for target shareholders using cumulative abnormal returns (CAR). The results in the paper control for alternative

explanations (e.g. firm-specific factors, country-specific characteristics) and show that cross country differences in cultural values explain patterns of M&A activity in target countries. It provides evidence that firms located in the result oriented countries are less likely to become targets and observe higher cumulative abnormal returns (a one standard deviation increase in culture score causes on average an increase in CAR by 3.70 percentage points). Firms from countries that have a high emphasis on the traditional oriented culture factor are more likely to become targets and experience lower cumulative abnormal returns (a one standard deviation increase in culture score causes on average a decrease in CAR by 3.40 percentage points). Firms from people oriented countries are more likely to become targets. The economic effects of cultural values on target shareholders' expected profits are substantial. Taken together, the findings of the paper suggest that firms from countries that are less likely to become targets experience higher cumulative abnormal returns and vice versa. The results are consistent with the findings of Aktas et al. (2010), which document that target firms' willingness to sell results in lower premiums.

I check the robustness of the results by adding various additional control variables, taking different sample specifications, using different definitions of dependent variables (for the cumulative abnormal returns analysis) and repeating main analyses using individual GLOBE culture dimensions. All these robustness checks confirm the main results of the paper.

I contribute to the existing literature studying effects of cultural values on M&A outcomes by showing that the cultural values of target countries have a strong influence on their economic outcomes. More precisely; target countries' cultural values affect the probability of firms becoming targets and value creation for target shareholders. The study adds to the growing literature on culture and finance showing that cultural values affect various economic decisions (for example, Stulz and Williamson (2003), Licht et al. (2005), Doidge et al. (2007), Guiso et al. (2008), Hilary and Hui (2009), Li et al. (2013) and Eun et al. (2015)).

The remainder of the paper is organized as follows. Section 2 describes the Conceptual background, culture framework and hypotheses, section 3 describes the data and research design, section 4 presents the empirical results while the section 5 concludes the paper.

2. Conceptual Background, Culture Framework and Hypotheses:

2.1. Culture and M&A Activity:

Ahern et al. (2015) investigate the effect of culture on cross-border mergers using three dimensions from the world values survey (trust, hierarchy and individualism). They document that cultural distance reduces merger volumes between countries and further provide evidence that it negatively affects the combined cumulative abnormal returns. Frijins et al. (2013) explore the effects of home market culture on diversifying international mergers and acquisitions using Hofstede's uncertainty avoidance cultural dimension. They show a strong negative relationship between uncertainty avoidance and diversifying international M&A activity. They also provide evidence that acquirers from high uncertainty avoidance countries accept higher premia. Ahmad et al. (2015) shift the viewpoint from cross-border to cross cultural M&A transactions applying the GLOBE culture framework. They provide evidence that result oriented and traditional oriented acquirers are less likely to choose cross-cultural targets and complete deals. People oriented acquirers are more likely to engage in cross-cultural transactions and complete the announced transactions. Lim et al. (2015) posit that impact of cultural distance can be asymmetrical and they provide evidence that US acquirers pay less premia to foreign targets with a greater cultural distance, but this phenomenon does not hold for foreign acquirers buying US targets. The negative effect of cultural distance is wiped out when bidders are more familiar with the target country's culture.

Taken together, the different studies suggest that acquirer countries' cultural values and cultural distance affect different M&A outcomes but do not show how target countries' cultural values affect M&A decisions. More specifically we lack an evidence in the literature on which cultures are more likely to become targets and how cultural values affect target firms' cumulative abnormal returns. I bridge this gap in the literature by studying effects of cultural values of target countries on M&A outcomes.

2.2. Culture Framework:

I use the recent and comprehensive cross-culture GLOBE study for two reasons. First, the project focuses on leadership related values and practices, so the culture dimensions developed have

implications for leadership (House et al. 2004)[39]. Hofstede (2006) argues that the respondents of the survey are middle managers and they function as sources and targets of leadership behavior, which I assume is important in M&A settings. Mergers and acquisitions are large stakes initiatives, managers are the leaders of the firms and they take such decisions. Second, the GLOBE analyses are done at the organization and country levels instead of individual level (Smith: 2006). Hanges and Dickson (2006) document that the GLOBE culture data has organization and national level culture properties and does not take into account the individual level. This makes it more relevant in my context because my theoretical reasoning is mainly based on firm level determinants.

GLOBE culture dimensions are built from survey of 17,300 middle managers in 951 organizations mainly from three industries (food processing, financial services and telecommunications) from 62 societies across the world. The project started in 1994 and the findings were made available in 2004. They provide a complete typology of culture by constructing nine culture dimensions: uncertainty avoidance (*tendency to follow laid down procedures to avoid uncertain events*); power distance (*leaning to accept uneven distribution of power*); in-group collectivism (*desire for family-based collectivism or familism*); institutional collectivism (*desire for institutional-based collectivism or nationalism*); gender egalitarianism (*minimizing gender inequity*); assertiveness (*dominance in relations*); future orientation (*tendency to make future oriented decisions*); performance orientation (*the desire for continued performance*); human orientation (*kind behaviors towards others*). The study differentiates between organizational and societal cultures. House et al. (2004: 146) document that "the scales are most immediately useful to cross-cultural rather than intra-cultural researchers". The culture dimensions are constructed in terms of *cultural values* and *cultural practices.* The fundamental culture is shaped by the *values*. Values are wide-ranging tendencies to desire or favor certain situations over others. Hofstede (1990) argues that societies are differentiated by values and organizations are by practices, so values are more relevant to differentiate societies. Weber et al. (1996) provide evidence that national culture is described by values and corporate culture is presented

[39] The GLOBE research program is carried out in three phases. In first phase, the researchers developed the instruments. In phase two, they quantified the core cultural attributes of the societies and organizations, and ranked 62 GLOBE societies according to societal culture dimensions. Third phase of the study is underway and studying the impact and effectiveness of core leader behaviors and styles of CEOs on attitudes and performance of the subordinates. (House et al. 2004).

by set of practices. They document that national culture differences will be a greater obstacle to realizing synergy gains than corporate culture. They further argue that national cultural values are more stringent than corporate practices. Ahern et al. (2015) state that cultural values affect economic decision making. For these reasons, I use cultural values in this study. Pre-selecting certain dimensions can compromise integrity of instrument, so I do not cherry-pick some dimensions of culture to study its effects in M&A decisions and apply all nine GLOBE culture dimensions.

Hofstede (2006) reports that GLOBE culture dimensions significantly correlate with each other, which I confirm by calculating their correlations matrix (Table 1). There are high and significant positive correlations between performance orientation and in-group collectivism, future orientation and uncertainty avoidance, institutional collectivism and future orientation, and uncertainty avoidance and institutional collectivism. Correlations between power distance and human orientation, and future orientation and gender egalitarianism are negative and highly significant. These high correlations can be potentially problematic for regression analysis. Following Ahmad et al. (2015), I simplify the nine GLOBE culture dimensions using principal component analysis.

Table 2 presents the results of the principal component analysis. I retain factors that have an Eigen value greater than 1 meaning I keep three viable and economically significant factors which explain 67% of the variance. Following Ahmad et al. (2015) and Griffin et al. (2015), I keep the dimensions with factor loadings greater than or equal to 0.50. The interpretations of the factors are the same as in Ahmad et al. (2015). The first factor individually explains 31% of the variance; the performance orientation and in-group collectivism culture dimensions load positively onto this factor. The characteristics of this factor suggest that these countries reward people based upon performance and encourage familism. I interpret this factor as a *result oriented* culture factor. Countries that score high on this factor are Colombia, Argentina, Canada, and the USA among others. The second factor individually explains 25% of the variation; uncertainty avoidance, future orientation and institutional collectivism load positively while gender egalitarianism loads negatively onto this factor. The characteristics of this factor suggest that people in the countries have a low level of tolerance for uncertain events, focus on future oriented goals, emphasize nationalism and accept gender inequality in their cultures. I interpret this factor as a *traditional oriented* culture factor. Countries that score

high on this factor are China, India, Taiwan and Iran among others. The third factor individually explains 11% of the variation; human orientation loads positively and power distance loads negatively onto this factor. The characteristics of the culture dimensions loaded on this factor suggests that people in these countries encourage hierarchical egalitarianism, promote fairness, openness and kind behavior to others. I interpret this factor as a *people oriented* culture factor. Countries that score high on this factor are Finland, Sweden, Austria and Switzerland. The assertiveness culture dimension does not load on any of the retained factors. The viability of the principal component analysis is confirmed by calculating Cronbach alpha for individual factors. The factors are orthogonal and statistically independent.

2.3. Hypotheses Development:

Result Oriented:

Result oriented societies encourage performance driven behavior among individuals or groups and encourage familism. People feel pride in being part of their group or organizations. Hoegal and Meuthel (2010) document that managers from performance oriented societies consciously manage their business environment and their actions to carefully accommodate the needs of team members. Building on the conscious behavior of managers from result oriented cultures, Ahmad et al. (2015) provide strong evidence that acquirers from such result oriented countries are less likely to engage in cross-cultural M&A deals and to complete the announced transactions. From the investors' perspective, Bao and Lewellyn (2013) show that investors from performance oriented countries have positive opinions about firms undertaking IPOs, which can be source of gain for minority shareholders.

Based on the above arguments, we can expect that managers of target firms will show cautious behavior while deciding to sell off their businesses and are therefore less likely to become targets. Once the decision to sell off the firm has been taken by management of the firm, then investors will see the initiative positively, leading to potentially higher cumulative abnormal returns.

I therefore formulate the following hypotheses:

Hypothesis 1: Target firms from result oriented countries are less likely to become targets.

Hypothesis 2: Target firms from result oriented countries are more likely to observe higher CAR.

Traditional Oriented:

Traditional oriented societies tend to avoid uncertain situations, emphasize long-term oriented goals, promote nationalism and accept gender equality in their cultures. The tendency to avoid uncertain situations provides an idea of the willingness of the members of a society to deal with uncertain situations and take risk (House et al: 2004). Ahmad et al. (2015) provide evidence that traditional oriented acquirers are less likely to engage in cross-cultural M&A transactions because of a lack of familiarity with the target market and are less likely to complete announced M&A deals because of the risk inherent in integrating new firms. Frjins et al. (2013) use the uncertainty avoidance culture dimension and show that countries with this dimension in their cultures are less likely to engage in diversifying international M&As. They further provide evidence that acquirers from high uncertainty avoidance countries observe higher announcement period abnormal stock returns and suggest that uncertainty avoidance captures the risk perception of CEOs. The long-term orientation dimension of this factor requires the managers to ensure long-term profitability for shareholders. Taken together, the risks associated with a failure to deliver long-term profits can cause firms to become targets. Target firm shareholders with *traditional oriented* cultures are future oriented and intuitively they are less likely to respond positively to short-term wealth creation. We can therefore expect lower cumulative abnormal returns for announced transactions.

I therefore formulate the following hypotheses:

Hypothesis 3: Target firms from traditional oriented countries are more likely to become targets.

Hypothesis 4: Target firms from traditional oriented countries are more likely to observe lower CAR.

People Oriented:

People oriented societies encourage hierarchical egalitarianism, promote fairness, altruistic and kind behavior towards others. Ahmad et al. (2015) document that acquirers from people oriented cultures are more likely to engage in cross-cultural acquisitions and to complete the announced transactions. Finland and Sweden score high on this culture factor. Sarala and Vaara (2010) and Vaara (2012) provide evidence that Finnish acquirers consider international M&As as a source of knowledge sharing and view them positively. I can expect that because of the hierarchical egalitarianism and positive view of the individuals such cultures, target firms may voluntarily engage in M&A activity.

Building on the same arguments, target firms' willingness to sell are determinants of the merger premium. The higher M&A activity of firms may lead to lower cumulative abnormal returns.

I therefore formulate the following hypotheses:
Hypothesis 5: Target firms from people oriented countries are more likely to become targets.
Hypothesis 6: Target firms from people oriented countries are more likely to observe lower CAR.

3. Data and Research Design:

3.1. Data

To examine the effects of culture on target countries' mergers and acquisitions activity, I collect data from different sources for the period 1990 – 2012. I apply the GLOBE culture framework in this study, therefore I collect the data for 62 GLOBE countries. The culture score for each individual GLOBE dimension is extracted from House et al. (2004). For my tests of target firms' synergy gains, I start with the largest sample of mergers and acquisitions possible. However, the sample is reduced for my tests of the probability of firms becoming targets because of additional data restriction[40].

I extract the mergers and acquisitions data from Security Data Company (SDC) database. I focus on completed M&A deals from January 1, 1990 to December 31, 2012 and apply the following data restrictions:

- The target nation is among the GLOBE societies.
- The target is a public listed firm.
- Completed deals.
- SDC reports the form of the deal as mergers, acquisitions, acquisitions of majority interest, acquisitions of assets, acquisitions of certain assets, acquisitions of remaining interest, and exchange offers.
- The deal size is greater than $1 million dollar.

[40] I only include deals where acquirer owns less than 50% before the transactions and more than 50% after the transactions. In many of the cases percentage owned after the transaction is 100%.

- SDC provides data on deal characteristics including transaction value, payment method, deal attitude, industry classification.
- Acquirer and target CUSIPS are different.
- Daily security prices data is available in Center for Research in Security Prices (CRSP) and Compustat Global Security Issue databases.
- Market indexes data are available in CRSP and Compustat Global databases.

The data filters yield a sample of 19,716 M&A deals by 13,302 firms in 44 GLOBE countries. I keep observations for which data on control variables is available and my final sample yields 12,027 M&A transactions by 9,375 firms across 39 countries.

I collect data on public listed firms across 44 GLOBE countries from CRSP and Compustat Global Security Issue databases for the period 1990 to 2012. I keep firms where data on firm characteristics (see appendix) are available and find 38,796 firms and 335,445 firm-year observations across 39 GLOBE countries. I collect country characteristics (see appendix) data from different data sources.

3.2. M&A Data Description:

Table 3 describes the M&A sample used in the regressions. Panel A of table 3 describes the composition of the sample of 12,027 M&A deals totaling $7,832 billion by year. The sample shows an increase in the number and dollar value of M&A deals from 1996 to 2000, consistent with the documented 1990s wave (Betton et al.: 2008) and another increase in number and dollar value of M&A transactions between 2005 and 2007. Panel B of the table 3 reports sample composition by country. The top three largest countries in my sample by number of M&A transactions are *USA* (6,152), *Japan* (2,537) and *Australia* (796), and the top three leading countries by M&A dollar volume are *USA* ($5,703 billion), *Japan* ($599 billion) and *England* ($233 billion). *England* undertakes fewer M&A transactions (232) which is 30% of *Australia* but the dollar volume is higher than *Australia* ($212 billion). The tenth largest nation in the sample is *South Africa* undertaking 102 M&A transactions, which is less than 12% of the third largest country, *Australia* and only approximately 2% of *USA*. Globally, the largest number of M&A transactions are from the developed

economies and the lowest numbers of acquisitions are from emerging economies which is in line with existing M&A studies.

3.3. Dependent Variables:

To investigate the effects of cultural values on the probability of firms becoming targets. I form a binary variable. It takes the value 1 if the listed firm receives a bid for control during my sample period and 0 otherwise.

I examine the effects of cultural values on target firms' cumulative abnormal returns. I calculate target CAR using a 3-day window over event days (-1, +1) relative to announcement date for each deal. I use the market model to estimate the cumulative abnormal returns and the value weighted CRSP index for US firms and local market indices for other countries to represent the market portfolio. The parameters of the market model are calculated over a 200-day (-236, -36) estimation period where day 0 is the M&A transaction' announcement date. I recalculate the CAR using a 7-day window over event days (-3, +3) and an 11-day window over event days (-5, +5) for use in robustness checks.

3.4. Variables of Interests:

I use the nine culture dimensions of GLOBE culture framework. They provide a score for each dimension for each country in my sample on a Likert scale from 1 to 7. A high score on a particular dimension shows that the country encourages and emphasizes the characteristic in its culture. I identify the target nation for each M&A transaction from SDC database and match with the score of each culture dimension of the GLOBE study. To deal with the potential issue of multicollinearity resulting from using nine culture dimensions in the regressions, I perform principal component analysis on nine GLOBE culture dimensions (as discussed in section 2.2) which yields three viable and meaningful culture factors. I use the factor scores predicted by the regression method.

3.5. Control Variables:

For the probability of firms becoming targets, I control for firm and country characteristics. Firm characteristics are consistent with Moeller et al. (2004). I include firm size, return on equity, debt to equity, sales growth and book value per share from CRSP and Compustat Global. All ratios are calculated at the end of the year and winsorized at the 5^{th} and 95^{th} percentiles to attenuate the effects of outliers. For the cumulative abnormal returns analysis, I control for deal, target-firm, target-country and country-pair characteristics, similar to Ahern et al. (2015). I obtain the deal-related variables including deal size, relative deal size, cash only dummy, same industry, cross-border dummy, toehold dummy, financial acquirer dummy and friendly deals dummy from the SDC database.

I include the target countries' economic and financial development using GDP, GDP growth, GDP per capita and market capitalization as percentage of GDP from World Development Bank indicators. To isolate the effects of target countries' openness to trade, I use the sum of imports and exports as a percentage of total GDP from World Development Bank indicators. Countries quality of institutions are likely to impact international M&A activity. Following Erel et al. (2012), I include investment profile, bureaucratic quality, corruption, and law & order from the International Country Risk Guide (ICRG). Corporate governance differences explain cross-country differences in M&A activity (Rossi and Volpin: 2004). To control for them, I use the anti self-dealing index and revised anti-directors right index developed by Djankov et al. (2008), and disclosure quality from La Porta et al. (1997, 1998).

Ahern et al. (2015) document that similar legal origins of acquirer and target countries boost merger activity between the two countries. To control for this effect, I include a dummy equal to one if acquirer and target countries share the same legal origin. Exchange rate differences are likely to motivate international M&A activity. I calculate the exchange rate volatility between acquirer and target countries over a period of 12 months prior to the announcement date. Exchange rate data is collected from the DataStream database. Erel et al. (2012) show that interest rate differences between acquirer and target countries are likely to impact cross-border M&A activity. I calculate the real interest rate differences between acquirer and target countries and using the data from World Development Bank indicators.

3.6. Descriptive Statistics:

Table 4 reports the mean, standard deviation, median, 25th percentile, 75th percentile and number of observations of all the variables used in the analyses. Variable definitions are given in the Appendix.

On average, 3.2% of the 335,445 firm-year observations are M&A targets. The average target CAR for 3-day, 7-day and 11-day event windows are 13.5%, 15.2% and 15.9% respectively which is very close to the CAR documented the existing literature. For example, Ahern et al. (2015) and Betton et al. (2008) show on average a 3-day target CAR of 16.90% and 13.38% respectively. The culture GLOBE dimensions used in this study show significant variation in my sample. Deal level characteristics are consistent with the figures presented in Ahern et al. (2015). For example, they report an average of 51% horizontal deals against 60% in my sample. Countries' economic development, institutional quality and governance related variables show substantial variance in the sample.

Table 5 shows the correlation matrix of dependent variables and the variables of interest. Pearson correlations coefficients between dependent variables and variables of interest are significant and consistent with my predictions. The *result oriented* factor analyzed culture dimension negatively and significantly correlates with the probability of firms becoming targets, and positively and significantly correlates with cumulative abnormal returns. The *traditional oriented* and *people oriented* factor analyzed culture dimensions positively and significantly correlate with probability of firms becoming targets, and negatively and significantly correlate with cumulative abnormal returns.

3.7. Research Design:

I use a probit model to assess the probability of a firm becoming target. The specifications of the model are as follows:

$$Prob.(Target\ Firm = 1)_{i,j,t} = \alpha_0 + \alpha_1 Result\_Oriented_{ctry_j} + \alpha_2 Traditional\_Oriented_{ctry_j} + \alpha_3 People\_Oriented_{ctry_j} + \alpha_k Firm\_Chars_{i,j,t} + \alpha_l\ Ctry\_Chars_{j,t} + Industry_{Dummies} + Year_{Dummies}) + e_{i,j,t}$$

Equation - (1)

where the dependent variable is a dummy variable equal to 1 if target firm *i* from country *j* becomes a target in year *t* while *i, j, t* are target firm, target country and year respectively . I then do set of robustness checks to validate the findings. In first set of robustness checks, I add additional control variables in the main model. In the second set of robustness checks, I use different sample criterion. Finally I recalculate my main model using individual GLOBE culture dimensions.

To test the predictions of the effects of cultural values on target firms' cumulative abnormal returns, I use ordinary least squares (OLS) regression. The specifications of the model are as follows:

$$Target\ Firms'CAR_{i,j,t} = \alpha_0 + \alpha_1 Result\_Oriented_{ctry_j} + \alpha_2 Traditional\_Oriented_{ctry_j} + \alpha_3 People\_Oriented_{ctry_j} + \alpha_k Firm\_Chars_{i,j,t} + \alpha_l Deal\_Chars_{i,j} + \alpha_m Ctry\_Chars_{j,t} + Ctry\_Pair\_Chars_{i,j,t} + Industry_{Dummies} + Year_{Dummies} + e_{i,j,t}$$

Equation - (2)

where the dependent variable is the 3-day target firms' CAR for deal *i* from target country *j* in year *t* where *i, j, t* are M&A deal, target country and year respectively. I confirm my findings through a number of robustness checks. First, I include additional control variables. Second, I apply different sample criterion. Third, I use different definitions of the dependent variables. Finally, I reestimate my main model using individual GLOBE culture dimensions.

In both models, I add industry dummies and year dummies. The inclusion of year dummies will capture the change in economic conditions over time. The addition of industry fixed effects will help in reducing concerns about omitted variable biases potentially arising from industry level unobservable factors.

4. Empirical Results:

The section describes the empirical results of the study. It is divided into two parts, the first part gives the snapshot of results of univariate analysis and second part describes the results of multivariate analysis.

4.1. Univariate Analysis:

Table 6 presents the results of univariate analysis. I provide a snapshot of differences in the number of target firms and cumulative abnormal returns between high and low scoring culture dimensions. I estimate the means of the target dummy variable and target CAR variables for the countries that score above and below the median of each culture dimension. Differences in mean for all variables are significantly different the two groups of countries. For the *result oriented* culture dimension, the proportion of target firms is significantly lower for countries with a high score. For the *traditional oriented* and *people oriented* culture dimensions, the proportion of target firms is significantly higher for countries with a high score. The results are consistent with my predictions on the probability of firms becoming targets. Firms from countries emphasizing the *result oriented* dimension are less likely to become targets and firms from countries that encourage the *traditional oriented* and *people oriented* culture dimensions are more likely to become targets.

The average mean CAR of target firms are also significantly different for the countries that score high or low on the culture dimensions. Target firms from high *result oriented* countries experience on average higher CAR than for the lower *result oriented* countries. Target firms from high *traditional oriented* and *people oriented* countries observe lower CAR. These differences in means are consistent with my predictions. The results remain unchanged if I use 7-day CAR and 11-day CAR.

4.2. Multivariate Analysis:

First, I test the predictions of my analysis of the probability of firms becoming targets and then I investigate the effect of culture on cumulative abnormal returns in multivariate settings.

4.2.1. Probability of firms becoming targets:

Table 7 presents the results of the regression estimates of the effects of factor analyzed culture dimensions on the probability of firms becoming targets. Columns 1 to 3 of table 7 include factor analyzed culture dimensions separately and column 4 includes all three. Each regression includes all firm and country characteristics. I exclude country characteristics in column 5 and column 6 reports estimates excluding firm characteristics. The results show that all three culture dimensions are

significantly related to probability of firms becoming targets after controlling for firm and country characteristics. They are robust across different model specifications.

The *result oriented* culture dimension is significantly negatively related to the probability of becoming a target in line with my prediction. Firms from countries with a high score for this dimension are less likely to become targets. The *traditional oriented* culture dimension is significantly positively associated with the probability of firms becoming targets in line with my prediction. Firms from countries with a high score for this dimension are more likely to become targets. The *people oriented* culture dimension is significantly positively associated with the probability of firms becoming targets in line with my prediction. Firms from countries with high score for this dimension are more likely to become targets. Results remain consistent when all dimensions are included. Most of the firm and country characteristics that are likely to impact M&A activity are significant and consistent with the existing literature. For example, highly leveraged firms are more likely to become targets, and firms that have high return on equity and high book value per share are less likely to become targets. Targets are from the countries that have lower economic activity and from growing economies. I add a large set of controls in my main regressions which might impact the results, therefore I compute the regression by excluding country characteristics in one model and excluding firm characteristics in another. The results obtained from both regressions remain significant and consistent with the main findings.

4.2.1.1. Robustness Checks – Probability of firms becoming targets:

Table 8 presents the robustness checks to confirm the results presented in the previous section. Panel A, B and C of table 8 provide the results of different set of robustness checks. I use the same set of control variables as reported in table 7 (unreported).

In Panel A of table 8, I add an additional set of controls to my baseline regressions. Corporate governance characteristics and the institutional quality of the countries affect the motives for mergers and acquisitions activity[41]. In columns 1 to 3, I include difference governance related variables and in columns 4 to 6 add variables describing the institutional quality of target countries. Globally, the

[41] See for example, Rossi and Volpin (2004), Ahern et al. (2012) and Erel et al. (2012).

results remain unchanged and consistent with the main findings. Firms from countries with a better corporate governance environment are less likely to become targets and firms from countries with better institutional quality are more likely to become targets.

My main sample includes 6,152 US M&A transactions (51.15% of the sample). Malhotra et al. (2011) document that cultural values of US and emerging countries affect M&A decisions differently. To ensure my results are not US-driven, I exclude US M&A transactions from my sample. The sample also includes financials firms, which may have different M&A acquisition patterns, so I exclude the them to confirm these firms do not impact my main results. Panel B of table 8 presents the results of the robustness checks when I exclude US firms and financial firms. The results confirm that US firms and financial firms in the sample do not affect my main results.

Panel C of table 8 presents the results on the effects of individual GLOBE culture dimensions on the probability of firms becoming targets. Columns 1 to 2 present the results for individual culture dimensions that load on the factor analyzed *result oriented* culture dimension. Columns 3 to 6 present the results for individual culture dimensions that load on the factor analyzed *traditional oriented* culture dimension and columns 7 to 8 show the results for individual culture dimensions that load on the factor analyzed *people oriented* culture dimension. The results are in line with my factor analyzed culture dimensions. Performance orientation and in-group collectivism load positively on the *result oriented* culture dimension and show a negative and significant coefficient consistent with the negative association between the factor analyzed dimension and probability of firms becoming targets. Similarly, uncertainty avoidance, future orientation, institutional collectivism load positively and gender egalitarianism loads negatively on the *traditional oriented* culture dimension. All the dimensions have appropriate coefficient signs and three dimensions (uncertainty avoidance, future orientation and gender egalitarianism) are statistically significant, consistent with the dominant effect of these dimensions on the factor analyzed dimension. The negative and significant coefficient for power distance and positive and significant coefficient for human orientation are also consistent with positive association between the factor analyzed *people oriented* culture dimension and probability of firms becoming targets, as power distance loads negatively and human orientation loads positively on this factor analyzed dimension.

4.2.2. Target firms' cumulative abnormal returns:

Table 9 presents the results of regression estimates of the effects of factor analyzed culture dimensions on target countries' cumulative abnormal returns. Columns 1 to 3 of table 9 include factor analyzed culture dimensions separately and column 4 includes all three. Each regression includes all firm and country characteristics. I exclude country characteristics in column 5 and column 6 reports estimates after excluding firm characteristics. The results show that two factor analyzed culture dimensions (*result oriented* and *traditional oriented*) are significantly related to target firms' cumulative abnormal returns after controlling for the deal, firm, country and country pair characteristics. They are robust across different model specifications.

The co-efficient of the *result oriented* culture dimension is positively and significantly related to target firms' CAR, consistent with my prediction. The magnitude of the coefficient is large (0.043): a one standard deviation increase in the *result oriented* culture dimension score causes an average increase in target firms' CAR of 3.70 percentage points, keeping everything else constant. Consistent with my prediction, I find the co-efficient of the *traditional oriented* culture dimension is negatively and significantly related to target firms' CAR, consistent with my prediction. The magnitude of the coefficient is large (0.049): a one standard deviation increase in the *traditional oriented* culture dimension score causes an average decrease in target firms' CAR of 3.40 percentage points, keeping everything else constant. Although the people oriented factor is significant and negative in model 1, the result is not robust to the inclusion of all factors or to other specifications. I cannot, therefore, reasonable interpret this result. When I take all three dimensions, the *people oriented* culture dimension becomes insignificant and do not find robust results for this dimension in subsequent tests.

Other control variables are consistent with the literature. For example, Andrade et al. (2001) document that shareholders of target firms gain in non-equity financing. They find higher CAR for non-stock financed deals for target firms. Cash deals in my sample are positively linked with higher CAR. Bauguess et al. (2009) document that for large target firms, CAR are lower and my result supports this finding. Public acquirers and toehold dummies are positively significantly associated with CAR (see Betton et al. 2008).

4.2.2.1. Robustness Checks – Target firms' cumulative abnormal returns:

Table 10 presents robustness checks. Panel A, B, C and D of table 10 provide the results of different set of robustness checks. I use the same sets of control variables as reported in table 9 (unreported).

Panel A of table 10 presents the results of the baseline model after inclusion of target countries' corporate governance and institutional quality characteristics. The addition of these variables does not affect the main findings. The additional variables are insignificant in the regressions except the anti self-dealing index, which is marginally significant.

Panel B of table 10 presents results when (a) I exclude US firms (see section 4.2.1.1); (b) I exclude financial firms (see section 4.2.1.1); (c) I screen to keep transactions with a relative deal size greater than 5%; and (d) I restrict my sample to change in control transactions. All the results remain consistent with my main findings.

Using a random sample of 500 US M&As, Fuller et al. (2002) find that the announcement dates provided by SDC are correct for 92.6% of the sample and are off by no more than 2 trading days for the remainder. To avoid the possibility that my results are affected by the choice of short event window, I recalculate 7-day and 11-day event window CAR. Panel C of table 10 reports the results when I replace the dependent variable with 7-day and 11-day event windows CAR. Coefficient signs and significance remain consistent with my main results.

Panel D of table 10 presents the results on the effects of individual GLOBE culture dimensions on target firms' CAR. Columns 1 to 2 present the results for individual culture dimensions that load on the factor analyzed *result oriented* culture dimension. Columns 3 to 6 present the results for individual culture dimensions that load on the factor analyzed *traditional oriented* culture dimension and columns 7 to 8 show the results for individual culture dimensions that load on the factor analyzed *people oriented* culture dimension. The results are in line with my factor analyzed culture dimensions. Performance orientation and in-group collectivism load positively on the *result oriented* culture dimension and show positive and significant coefficient consistent with the positive association between the factor analyzed dimension and target firms' CAR. Similarly, uncertainty avoidance, future orientation, institutional collectivism load positively and gender egalitarianism loads

negatively on the *traditional oriented* culture dimension. Coefficient signs for all individual dimensions are consistent with the factor analyzed dimensions, except institutional collectivism. Power distance loads negatively and human orientation loads positively on the factor analyzed *people oriented* culture dimension and both of these dimensions remain insignificant consistent with findings of the factor analyze *people oriented* culture dimension.

5. Conclusion:

The study extends recent research on the effects of cultural values on international M&A activity and investigates these effects from the target countries' perspective. More specifically, I examine which cultures are more likely to become targets and how the cultural values of the countries affect target firms' cumulative abnormal returns. I use the recent and comprehensive GLOBE culture framework (House et al. (2004)). I examine 12,027 M&A transactions by 9,375 target firms across 39 GLOBE countries and analyze the probability of firms becoming targets on 335,445 firm-year observations.

I provide strong evidence for the effects of culture on target countries' M&A activity. Cultural values of target countries affect the probability of them becoming a target and affect the returns to target shareholders after controlling for deal level, firm level, country level and country pair level control variables. I find that *result oriented* cultures are less likely to become targets while *traditional oriented* and *people oriented* cultures are more likely to become targets. Highly leveraged and low profit yielding firms are more likely to become target. Firms with lower book value per share are more likely to sell their businesses off. I further extend my analysis to target firms' cumulative abnormal returns. I find that target firms from the *result oriented* countries make better deals and earn higher CAR. Target firms from the *traditional oriented* countries earn lower CAR. The effect is economically significant. These results are robust across different specifications (inclusion of additional control variables, different sample specification, different dependent variable definitions and use of individual GLOBE culture dimensions). This study contributes to the growing literature on the effects of culture on economic decision making in finance and particularly adds to research that investigates the effects of culture on M&A activity by showing that in addition to the cultural values of the acquirer countries, the cultural values of target countries have pronounced effects on their M&A decisions.

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Table 1 - Correlation Matrix of GLOBE Culture Dimensions
The table provides the correlation matrix of nine GLOBE culture dimensions. ***, **, * indicate significance at 1%, 5% and 10% respectively.

GLOBE Dimensions	PO	FO	GE	AS	IC	IGC	PD	HO	UA
Performance Orientation (Po)	1								
Future Orientation (FO)	***0.414	1							
Gender Egalitarianism (GE)	*0.216	***-0.354	1						
Assertiveness (AS)	-0.013	0.071	**-0.270	1					
Institutional Collectivism (IC)	***0.437	***0.487	-0.043	-0.210	1				
In-group Collectivism (IGC)	***0.592	***0.499	0.154	-0.012	**0.300	1			
Power Distance (PD)	***-0.392	-0.071	***-0.491	**0.292	**-0.306	*-0.236	1		
Human Orientation (HO)	0.059	-0.121	0.209	-0.106	-0.137	-0.152	***-0.418	1	
Uncertainty Avoidance (UA)	0.143	***0.560	***0.386	0.169	***0.362	**0.265	0.075	-0.146	1

Table 2 – GLOBE Dimensions Factor Analysis
Table 2 shows the factor loadings of nine culture dimensions at societal level of GLOBE study for 62 societies on four factors. The loadings with absolute value equal or less than 0.50 are left blank.

	Factor 1 [Result Oriented]	**Factor 2 [Traditional Oriented]**	**Factor 3 [People Oriented]**
Eigen values	2.76	2.24	1.02
Percentage variance explained	0.31	0.25	0.11
Cumulative percentage.	0.31	0.56	0.67
Factor Loadings			
Assertiveness			
Institutional Collectivism		0.50	
Uncertainty Avoidance		0.81	
Gender Egalitarianism		-0.72	
Future Orientation		0.76	
In-group Collectivism	0.86		
Performance Orientation	0.84		
Power Distance			-0.65
Human Orientation			0.94
Cronbach Alpha	0.70	0.70	0.60

Table 3 – M&A sample composition

The table shows the mergers and acquisitions sample composition. Panel A displays the data by year and Panel B shows sample composition by country. The data is collected from SDC database. Number of M&A deals, percentage of mergers and acquisitions deals to total M&A activity of the sample and cumulative percentage of M&A deals are reported in columns 1, 2 and 3 respectively. Columns 4, 5 and 6 report the transaction values in millions of dollar, percentage of transaction value to total transactions value of the sample and cumulative percentages respectively.

Panel A – By Year

Year	No. of M&A Deals	No. of M&A Deals [Perct.]	No. of M&A Deals [Cum. Perct.]	Transaction Value [In $ Million]	Transaction Value [Perct.]	Transaction Value [Cum. Perct.]
	1	2	3	4	5	6
1990	263	2.19	2.19	48573	0.62	0.62
1991	204	1.70	3.88	42594	0.54	1.16
1992	172	1.43	5.31	38834	0.50	1.66
1993	275	2.29	7.60	90486	1.16	2.82
1994	357	2.97	10.57	72494	0.93	3.74
1995	494	4.11	14.68	224433	2.87	6.61
1996	572	4.76	19.43	253604	3.24	9.84
1997	538	4.47	23.90	334258	4.27	14.11
1998	613	5.10	29.00	712628	9.10	23.21
1999	637	5.30	34.30	961746	12.28	35.49
2000	615	5.11	39.41	716813	9.15	44.64
2001	448	3.72	43.14	230166	2.94	47.58
2002	401	3.33	46.47	222219	2.84	50.42
2003	423	3.52	49.99	222891	2.85	53.27
2004	443	3.68	53.67	415624	5.31	58.57
2005	558	4.64	58.31	505141	6.45	65.02
2006	641	5.33	63.64	531876	6.79	71.81
2007	777	6.46	70.10	688990	8.80	80.61
2008	636	5.29	75.39	379028	4.84	85.45
2009	738	6.14	81.52	293832	3.75	89.20
2010	840	6.98	88.51	294686	3.76	92.97
2011	747	6.21	94.72	334732	4.27	97.24
2012	635	5.28	100.00	216218	2.76	100.00
All Years	**12027**	**100**		**7831869**	**100**	

Panel B – Country Wise

Country	No. of M&A Deals	No. of M&A Deals [Perct.]	No. of M&A Deals [Cum. Perct.]	Transaction Value [In $ Million]	Transaction Value [Perct.]	Transaction Value [Cum. Perct.]
	1	2	3	4	5	6
Argentina	9	0.07	0.07	3227	0.04	0.04
Australia	796	6.62	6.69	212083	2.71	2.75
Austria	1	0.01	6.70	100	0.00	2.75
China	4	0.03	6.73	233	0.00	2.75
Colombia	5	0.04	6.78	1135	0.01	2.77
Denmark	23	0.19	6.97	15910	0.20	2.97
Egypt	10	0.08	7.05	3410	0.04	3.01
England	232	1.93	8.98	233903	2.99	6.00
Finland	25	0.21	9.19	18278	0.23	6.23
France	82	0.68	9.87	228349	2.92	9.15
Germany	68	0.57	10.43	81336	1.04	10.19
Greece	24	0.20	10.63	9368	0.12	10.31
Hong Kong	56	0.47	11.10	11604	0.15	10.46
Hungary	6	0.05	11.15	815	0.01	10.47
India	232	1.93	13.08	37633	0.48	10.95
Indonesia	61	0.51	13.59	13734	0.18	11.12
Ireland	15	0.12	13.71	11570	0.15	11.27
Israel	19	0.16	13.87	4759	0.06	11.33
Italy	106	0.88	14.75	131119	1.67	13.01
Japan	2537	21.09	35.84	599354	7.65	20.66
Malaysia	251	2.09	37.93	24688	0.32	20.97
Mexico	20	0.17	38.10	59366	0.76	21.73
Netherlands	87	0.72	38.82	177919	2.27	24.00
New Zealand	69	0.57	39.39	12048	0.15	24.16
Nigeria	3	0.02	39.42	713	0.01	24.17
Philippines	27	0.22	39.64	6323	0.08	24.25
Poland	4	0.03	39.68	491	0.01	24.25
Portugal	4	0.03	39.71	1231	0.02	24.27
Russia	18	0.15	39.86	25576	0.33	24.60
Singapore	219	1.82	41.68	36457	0.47	25.06
South Africa (White Sample)	102	0.85	42.53	33246	0.42	25.49
South Korea	585	4.86	47.39	52190	0.67	26.15
Spain	42	0.35	47.74	22974	0.29	26.45
Sweden	66	0.55	48.29	46488	0.59	27.04
Thailand	67	0.56	48.85	11269	0.14	27.18
USA	6152	51.15	100.00	5702970	72.82	100.00
All Countries	**12027**	**100.00**		**7831869**	**100.00**	

Table 4 – Descriptive Statistics
The table reports the mean, standard deviation, median, 25th percentile, 75th percentile and number of observations of all the variables used in the analyses. Score on the culture dimensions are collected from House et al. (2004), M&A data are collected from SDC database, firms data are collected from CRSP (US firms) and Compustat Global (rest of the world firms), other variables are collected from different data sources. Variable definitions are given in the Appendix.

	Mean	SD	25th Pctl.	50th Pctl.	75th Pctl.	Observations
Dependent Variable						
Target Dummy	0.032	0.177	0.000	0.000	0.000	335445
CAR (-1,+1)	0.135	0.232	0.003	0.077	0.213	12027
CAR (-3,+3)	0.152	0.254	0.002	0.093	0.248	10287
CAR (-5,+5)	0.159	0.272	0.000	0.102	0.264	9093
Variables of Interest						
Performance Orientation	5.874	0.338	5.670	6.050	6.140	335445
Future Orientation	5.307	0.294	5.150	5.310	5.310	335445
Gender Egalitarianism	4.680	0.470	4.330	4.990	5.060	335445
Assertiveness	4.405	0.701	3.810	4.320	4.760	335445
Institutional Collectivism	4.360	0.347	4.170	4.170	4.560	335445
In-group Collectivism	5.568	0.265	5.320	5.750	5.770	335445
Power Distance	2.820	0.165	2.780	2.850	2.860	335445
Human Orientation	5.467	0.146	5.410	5.530	5.530	335445
Uncertainty Avoidance	4.329	0.465	4.000	4.110	4.670	335445
Deal Characteristics						
Deal Size	4.102	2.122	2.349	3.984	5.591	12027
Relative Size	1.122	19.008	0.120	0.632	1.373	12027
Target Size	4.946	1.732	3.703	4.780	6.029	12027
Cash Only	0.699	0.459	0.000	1.000	1.000	12027
Same Industry	0.607	0.488	0.000	1.000	1.000	12027
Cross-Border	0.139	0.346	0.000	0.000	0.000	12027
Public Acquirer	0.548	0.498	0.000	1.000	1.000	12027
Toehold Dummy	0.322	0.467	0.000	0.000	1.000	12027
Financial Acquirer	0.144	0.351	0.000	0.000	0.000	12027
Friendly Deals	0.799	0.401	1.000	1.000	1.000	12027
Firm Characteristics						
Firm Size	5.297	2.126	3.826	5.172	6.608	335445
Return on Equity	0.200	0.286	0.079	0.204	0.347	335445
Debt to Equity	1.941	2.495	0.485	1.081	2.198	335445
Sales Growth	0.129	0.305	-0.037	0.076	0.235	335445
Book Value Per Share	6.299	8.282	0.497	2.631	8.831	335445
Country Characteristics						
GDP	28.567	1.46	27.579	29.09	29.784	335445
GDP Growth	3.474	3.318	1.776	3.351	4.652	335445
GDP Per Capita	9.757	1.287	9.327	10.356	10.583	335445

Market Cap. % of GDP	4.469	0.528	4.208	4.56	4.878	335445
Openness	0.555	0.644	0.232	0.313	0.561	335445
Investment Profile	9.656	2.141	7.500	10.380	11.580	335445
Bureaucratic Quality	3.553	0.709	3.000	4.000	4.000	335445
Corruption	3.729	1.091	2.830	4.000	4.630	335445
Law & Order	5.023	0.947	4.500	5.000	6.000	335445
Anti-Self Dealing Index	0.637	0.181	0.480	0.650	0.780	335445
Anti Director Rights	3.443	1.071	3.000	3.000	4.000	335445
Disclosure Quality	0.688	0.067	0.650	0.710	0.710	302485
Country Pair Characteristics						
Same Legal Origin	0.932	0.251	1.000	1.000	1.000	12027
Exchange Rate Volatility	0.013	0.046	0.000	0.000	0.000	12027
Real Interest Rate	0.004	0.015	0.000	0.000	0.000	12027

Table 5 – Correlation Matrix:
The table shows the correlation matrix of dependent variables and the variables of interests. Column 1 lists the variables of interests, column 2 and columns 3 describe correlation of variables of interest with probability of firms becoming target and wealth creation effects for target shareholders variable. ***, **, * indicate significance at 1%, 5% and 10% respectively.

Factor Analyzed Culture Dimensions	Target Dummy	CAR (-1, +1)
Result Oriented	***-0.025	***0.182
Traditional Oriented	***0.017	***-0.209
People Oriented	***0.019	**-0.027

Table 6 – Univariate Analysis:
The table presents the results of univariate analysis. The statistical significance in the differences between above and below median value of each culture factor score is indicated by * for significance at the 10% level, ** for significance at the 5% level, and *** for significance at the 1% level.

	Result Oriented				Traditional Oriented				People Oriented			
	High	**Low**	**Difference (High-Low).**	**t-value**	**High**	**Low**	**Difference (High-Low).**	**t-value**	**High**	**Low**	**Difference (High-Low).**	**t-value**
Target Dummy	0.031	0.035	***-0.004	-7.02	0.037	0.028	***0.008	13.60	0.035	0.025	***0.010	15.26
CAR (-1, +1)	0.159	0.076	***0.083	17.82	0.053	0.149	***-0.097	-16.28	0.090	0.145	***-0.055	-9.82
CAR (-3, +3)	0.171	0.103	***0.068	12.24	0.064	0.167	***-0.103	-14.75	0.100	0.163	***-0.063	-9.62
CAR (-5, +5)	0.175	0.112	***0.059	9.34	0.070	0.175	***-0.106	-13.67	0.108	0.171	***-0.063	-8.75

Table 7 – Probability of firms becoming targets:
The table presents the regression estimates of the probability of firms becoming targets regressions obtained from Probit model on three factor analyzed GLOBE culture dimensions. The dependent variable is a dummy variable equal if the firms receive a bid for control in the sample period and 0 otherwise. Variables of interest are scores on GLOBE factor analyzed culture dimensions. The details on control variables including firm and country characteristics are given in Appendix. Z-value is reported in parenthesis. Columns 1 to 3 present the results of each individual factor analyzed culture dimensions, column 4 presents the results of three factor analyzed culture dimensions. Column 5 shows the results by excluding country characteristics and column 6 presents the results by excluding results from main model. Standard errors are clustered at firm level. *, **, *** indicate the significance at 10%, 5% and 1% respectively.

	1	2	3	4	5	6
Variables of Interest						
Result Oriented	***-0.095			***-0.061	***-0.070	***-0.055
	(9.96)			(6.17)	(7.38)	(5.50)
Traditional Oriented		***0.145		***0.104	***0.049	***0.121
		(11.06)		(7.57)	(5.30)	(8.94)
People Oriented			***0.082	***0.063	***0.096	***0.062
			(5.67)	(4.42)	(5.02)	(4.40)
Firm Characteristics						
Firm Size	***0.045	***0.041	***0.045	***0.042	***0.036	
	(12.96)	(11.68)	(13.00)	(12.04)	(10.90)	
Return on Equity	***-0.346	***-0.336	***-0.343	***-0.339	***-0.323	
	(16.11)	(15.85)	(16.29)	(15.85)	(15.63)	
Debt to Equity	***0.024	***0.024	***0.023	***0.023	***0.021	
	(8.37)	(8.69)	(8.28)	(8.09)	(7.64)	
Sales Growth	*0.035	*0.034	0.023	**0.038	0.024	
	(1.96)	(1.88)	(1.32)	(2.13)	(1.36)	
Book Value Per Share	**-0.002	*-0.002	*-0.002	***-0.003	**-0.002	
	(2.42)	(1.67)	(1.70)	(3.12)	(2.24)	
Country Characteristics						
GDP	***-0.103	***-0.097	***-0.097	***-0.099		***-0.083
	(15.64)	(14.36)	(14.83)	(14.68)		(12.54)
GDP Growth	***0.007	***0.014	***0.011	***0.011		***0.011
	(2.72)	(5.59)	(4.15)	(4.12)		(4.24)
GDP Per Capita	***0.050	***0.119	***0.065	***0.085		***0.105
	(5.09)	(10.98)	(6.84)	(7.50)		(9.42)
Market Cap. % of GDP	*-0.026	***-0.054	***-0.082	***-0.038		***-0.040
	(1.82)	(4.07)	(6.15)	(2.66)		(2.75)
Openness	***-0.060	***-0.089	***-0.036	***-0.094		***-0.085
	(4.33)	(5.84)	(2.66)	(6.41)		(5.80)
Investment Profile	***0.021	***0.029	0.005	***0.036		***0.032
	(3.78)	(4.96)	(0.95)	(6.08)		(5.39)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo-R-Squared	0.031	0.031	0.03	0.033	0.026	0.026
Log Likelihood	-46446.854	-46431.491	-46513.128	-46366.752	-46683.612	-46673.147
Observations	335445	335445	335445	335445	335445	335445

Table 8 – Robustness Checks - Probability of firms becoming targets:
Panel A and B of the table present the regression estimates of the probability of firms becoming targets regressions obtained from Probit model on three factor analyzed GLOBE culture dimensions. Panel C presents the regression estimates of the probability of firms becoming targets regressions obtained from Probit model on individual GLOBE culture dimensions. The dependent variable is a dummy variable equal if the firms receive a bid for control in the sample period and 0 otherwise. Variables of interest are scores on GLOBE factor analyzed culture dimensions. The details on control variables including firm and country characteristics are given in Appendix. Z-value is reported in parenthesis. Standard errors are clustered at firm level. *, **, *** indicate the significance at 10%, 5% and 1% respectively.

Panel A – Additional Controls:

	1	2	3	4	5	6
Variables of Interest						
Result Oriented	***-0.055	***-0.060	***-0.071	***-0.058	***-0.060	**-0.028
	(5.59)	(5.99)	(6.13)	(5.84)	(6.04)	(2.52)
Traditional Oriented	***0.110	***0.103	***0.070	***0.135	***0.120	***0.165
	(8.19)	(7.48)	(4.88)	(8.83)	(7.79)	(10.10)
People Oriented	0.016	***0.068	***0.043	***0.066	***0.062	***0.074
	(1.13)	(4.69)	(2.98)	(4.58)	(4.35)	(5.12)
Additional Controls						
Anti-Self Dealing Index	***-0.448					
	(10.50)					
Anti Director Rights		***-0.021				
		(2.69)				
Disclosure Quality			***-1.521			
			(10.29)			
Bureaucratic Quality				***0.080		
				(4.52)		
Corruption					**0.023	
					(2.28)	
Law & Order						***0.087
						(6.64)
Firm Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Country Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo-R-Squared	0.035	0.033	0.037	0.033	0.033	0.034
Log Likelihood	-46282.963	-46360.856	-41776.06	-46347.6	-46363.215	-46325.441
Observations	335445	335445	302485	335445	335445	335445

Panel B – Different Sample Criterion

	Non-US	Non-Financial Firms
Variables of Interest		
Result Oriented	***-0.090	***-0.054
	(5.35)	(5.09)
Traditional Oriented	***0.084	***0.090
	(5.72)	(6.08)
People Oriented	***0.056	***0.073
	(4.02)	(4.74)
Firm Characteristics	Yes	Yes
Country Characteristics	Yes	Yes
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Pseudo-R-Squared	0.04	0.03
Log Likelihood	-32106.744	-40112.939
Observations	212960	293537

Panel C – GLOBE Culture Dimensions:

	Result Oriented		Traditional Oriented				People Oriented	
	1	2	3	4	5	6	7	8
Variables of Interest								
Performance Orientation	***-0.256							
	(11.93)							
In-group Collectivism		***-0.225						
		(7.93)						
Uncertainty Avoidance			**0.058					
			(2.36)					
Future Orientation				***0.105				
				(4.89)				
Gender Egalitarianism					***-0.191			
					(9.57)			
Institutional Collectivism						(0.03)		
						(1.25)		
Power Distance							**-0.098	
							(2.38)	
Human Orientation								***0.134
								(2.76)
Firm Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo-R-Squared	0.032	0.03	0.029	0.029	0.031	0.029	0.029	0.029
Log Likelihood	-46398.23	-46490.38	-46547.71	-46533.80	-46458.35	-46551.16	-46546.98	-46545.05
Observations	335445	335445	335445	335445	335445	335445	335445	335445

Table 9 – Target firms' cumulative abnormal returns:
The table presents the regression estimates of the target firms ' cumulative abnormal returns obtained from OLS model on three factor analyzed GLOBE culture dimensions. The dependent variable is the target firms' announcement period 3-day CAR spread over (-1,+1) relative to announcement date. Variables of interest are scores on GLOBE factor analyzed culture dimensions. The details on control variables including firm and country characteristics are given in Appendix. Z-value is reported in parenthesis. Columns 1 to 3 present the results of each individual factor analyzed culture dimensions, column 4 presents the results of three factor analyzed culture dimensions. Column 5 shows the results by excluding country characteristics and column 6 presents the results by excluding results from main model. Standard errors are clustered at country level. *, **, *** indicate the significance at 10%, 5% and 1% respectively.

	1	2	3	4	5	6
Variables of Interest						
Result Oriented	***0.043			***0.034	***0.031	***0.051
	(6.43)			(5.43)	(5.43)	(5.62)
Traditional Oriented		***-0.049		***-0.023	***-0.041	***-0.035
		(3.89)		(4.02)	(7.65)	(3.92)
People Oriented			**-0.016	0.002	0.008	0.002
			(2.07)	(0.30)	(1.09)	(0.22)
Deal & Firm Characteristics						
Deal Size	***0.057	***0.060	***0.062	***0.057	***0.057	
	(7.26)	(7.71)	(8.60)	(7.09)	(7.23)	
Relative Size	*** -0.000	***-0.000	***-0.000	***-0.000	***-0.000	
	(4.95)	(5.05)	(4.79)	(5.10)	(5.85)	
Target Size	***-0.065	***-0.067	***-0.068	***-0.065	***-0.065	
	(6.16)	(6.34)	(6.82)	(6.05)	(6.15)	
Cash Only	***0.090	***0.092	***0.092	***0.090	***0.090	
	(6.70)	(6.80)	(6.97)	(6.69)	(6.56)	
Same Industry	**-0.010	**-0.011	**-0.012	**-0.010	**-0.010	
	(2.04)	(2.14)	(2.27)	(2.02)	(2.08)	
Cross-Border	(0.02)	(0.02)	(0.01)	(0.03)	(0.01)	
	(1.35)	(1.10)	(0.62)	(1.51)	(0.67)	
Public Acquirer	***0.028	***0.026	***0.023	***0.029	***0.028	
	(3.86)	(3.68)	(3.26)	(4.02)	(3.99)	
Toehold Dummy	***0.018	***0.016	***0.013	***0.019	***0.018	
	(4.80)	(3.88)	(2.69)	(5.06)	(4.45)	
Financial Acquirer	*-0.011	* -0.011	**-0.011	*-0.011	*-0.010	
	(1.92)	(1.94)	(2.07)	(1.88)	(1.68)	
Friendly Deals	0.013	0.009	0.008	0.013	0.014	
	(1.26)	(0.90)	(0.78)	(1.21)	(1.29)	
Country Characteristics						
GDP	*0.005	**0.008	***0.016	0.004		**0.008
	(1.81)	(2.43)	(3.00)	(1.39)		(2.52)
GDP Per Capita	***0.022	-0.008	0.01	*0.012		**0.015
	(3.14)	(1.09)	(1.46)	(1.94)		(2.56)

GDP Growth	-0.001	0.000	0.002	-0.001		-0.002
	(0.71)	(0.04)	(1.06)	(0.89)		(1.55)
Market Cap. % of GDP	**0.018	***0.036	**0.039	***0.021		***0.033
	(2.27)	(3.07)	(2.28)	(3.01)		(3.28)
Investment Profile	0.003	0.003	0.006	0.002		-0.001
	(0.57)	(0.49)	(1.08)	(0.37)		(0.32)
Country Pair Characteristics						
Same Legal Origin	-0.015	-0.01	-0.005	*-0.016		**-0.014
	(1.64)	(1.00)	(0.50)	(1.70)		(1.98)
Exchange Rate Volatility	**0.165	*0.127	0.119	**0.160		-0.011
	(2.23)	(1.82)	(1.57)	(2.26)		(0.25)
Real Interest Rate	0.056	0.094	0.184	0.041		0.022
	(0.31)	(0.54)	(1.05)	(0.23)		(0.15)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-Squared	0.21	0.21	0.21	0.22	0.21	0.11
Observations	12,027	12,027	12,027	12,027	12,027	12,027

Table 10 – Robustness Checks – Target firms' cumulative abnormal returns:
Panel A, B and C of the table present the regression estimates of the target firms ' cumulative abnormal returns obtained from OLS model on three factor analyzed GLOBE culture dimensions. Panel D of the table presents the regression estimates of the target firms' cumulative abnormal returns obtained from OLS model on individual GLOBE culture dimensions. The dependent variable is the target firms' announcement period 3-day CAR spread over (-1,+1) relative to announcement date. Variables of interest are scores on GLOBE factor analyzed culture dimensions. The details on control variables including firm and country characteristics are given in Appendix. Z-value is reported in parenthesis. Standard errors are clustered at country level. *, **, *** indicate the significance at 10%, 5% and 1% respectively.

Panel A – Additional Controls

	1	2	3	4	5	6
Variables of Interest						
Result Oriented	***0.028	***0.035	***0.030	***0.037	***0.035	***0.035
	(4.09)	(5.42)	(4.58)	(5.26)	(5.70)	(5.49)
Traditional Oriented	***-0.026	***-0.022	***-0.023	**-0.016	**-0.020	***-0.021
	(4.41)	(3.51)	(3.66)	(2.07)	(2.21)	(2.79)
People Oriented	0.005	0.002	0.001	0.004	0.002	0.002
	(0.89)	(0.31)	(0.14)	(0.64)	(0.38)	(0.33)
Additional Controls						
Anti-Self Dealing Index	*0.059					
	(1.81)					
Anti Director Rights		0.006				
		(0.91)				
Disclosure Quality			0.111			
			(1.23)			
Bureaucratic Quality				0.018		
				(1.56)		
Corruption					0.004	
					(0.40)	
Law & Order						0.003
						(0.39)
Deal and Firm Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Country Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Country Pair Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-Squared	0.216	0.216	0.215	0.216	0.216	0.216
Observations	12027	12027	11877	12027	12027	12027

Panel B – Different Sample Criterion

	Non-US	**Non-Financial Firms**	**Rel. Deal Size>5%**	**Bid for Control**
Variables of Interest				
Result Oriented	**0.015	***0.035	***0.032	***0.033
	(2.15)	(4.73)	(6.55)	(3.78)
Traditional Oriented	***-0.029	***-0.021	***-0.024	**-0.028
	(6.37)	(3.81)	(4.09)	(2.18)
People Oriented	0.000	0.001	0.000	0.004
	(0.01)	(0.23)	(0.01)	(0.36)
Deal and Firm Characteristics	Yes	Yes	Yes	Yes
Country Characteristics	Yes	Yes	Yes	Yes
Country Pair Characteristics	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
R-Squared	0.155	0.214	0.211	0.208
Observations	5875	10303	10758	6314

Panel C – Different Dependent Variable Definition:

	CAR (-3,+3)	**CAR (-5,+5)**
Variables of Interest		
Result Oriented	***0.023	***0.021
	(3.93)	(3.46)
Traditional Oriented	***-0.022	***-0.022
	(2.99)	(2.68)
People Oriented	-0.003	-0.003
	(0.49)	(0.42)
Deal and Firm Characteristics	Yes	Yes
Country Characteristics	Yes	Yes
Country Pair Characteristics	Yes	Yes
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
R-Squared	0.206	0.199
Observations	10287	9093

Panel D – GLOBE Culture Dimensions

	Result Oriented		**Traditional Oriented**				**People Oriented**	
	1	2	3	4	5	6	7	8
Variables of Interest								
Performance Orientation	***0.095							
	(7.76)							
In-group Collectivism		***0.107						
		(3.82)						
Uncertainty Avoidance			***-0.093					
			(3.03)					
Gender Egalitarianism				***0.091				
				(4.66)				
Institutional Collectivism					**0.071			
					(2.21)			
Future Orientation						-0.028		
						(1.08)		
Power Distance							0.021	
							(0.49)	
Human Orientation								0.011
								(0.26)
Deal and Firm Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Pair Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-Squared	0.215	0.211	0.209	0.212	0.207	0.204	0.204	0.204
Observations	12027	12027	12027	12027	12027	12027	12027	12027

Appendix:

Variable Definitions

Variables Name	Definition
Dependent Variables	
Target Dummy	It is a dummy variable equal to 1 if firm is receives bid for control in sample period and 0 otherwise. (Source: SDC Mergers & Corporate Transaction Database)
CAR (-1, +1)	Target CAR using 3-day window over event days (-1, +1) and employ classic market model to estimate the normal returns and the value weighted CRSP index for US firms and local market indices for rest of the world countries as a typology of market portfolio. The parameters of the market model are calculated over a 200-days (-236, -36) estimation period where day 0 is the M&A transactions' announcement date. (Source: Author Calculations).
CAR (-3, +3)	Target CAR using 7-day window over event days (-3, +3) and employ classic market model to estimate the normal returns and the value weighted CRSP index for US firms and local market indices for rest of the world countries as a typology of market portfolio. The parameters of the market model are calculated over a 200-days (-236, -36) estimation period where day 0 is the M&A transactions' announcement date. (Source: Author Calculations).
CAR (-5, +5)	Target CAR using 11-day window over event days (-5, +5) and employ classic market model to estimate the normal returns and the value weighted CRSP index for US firms and local market indices for rest of the world countries as a typology of market portfolio. The parameters of the market model are calculated over a 200-days (-236, -36) estimation period where day 0 is the M&A transactions' announcement date. (Source: Author Calculations).
Variables of Interest:	
GLOBE Nine Cultural Dimensions	
Performance Orientation	Society performance orientation score. (Source: House et al.: 2004)
Future Orientation	Society future orientation score. (Source: House et al.: 2004)
Gender Egalitarianism	Society gender egalitarianism score. (Source: House et al.: 2004)
Assertiveness	Society assertiveness score. (Source: House et al.:.2004)
Institutional Collectivism	Society institutional collectivism score. (Source: House et al.: 2004)
In-group Collectivism	Society in-group collectivism score. (Source: House et al.: 2004)
Power Distance	Society power distance score. (Source: House et al.: 2004)
Human Orientation	Society human orientation score. (Source: House et al.: 2004)
Uncertainty Avoidance	Society uncertainty avoidance score. (Source: House et al.: 2004)
Control Variables:	
Deal Characteristics	
Deal Size	Natural logarithm of dollar value of all consideration paid in M&A transaction minus costs and fees. (Source: SDC Mergers & Corporate Transaction Database)
Relative Size	Ratio of the transaction value to the market value of target firm. (Source: SDC Mergers & Corporate Transaction Database)
Target Size	Natural logarithm of dollar value of market value of target firm. (Source: SDC Mergers & Corporate Transaction Database)
Cash Only	It is a dummy variable equal to one if the payment is made with all cash in the merger and 0 otherwise. (Source: SDC Mergers & Corporate Transaction Database).
Same Industry	It is a dummy variable equal to one if the merger is made in the same industry and 0 otherwise. (Source: SDC Mergers & Corporate Transaction Database).
Share Border	It is a dummy variable equal to 1 if acquirer and target countries share border and 0 otherwise. (Source: CEPII).
Public Acquirer	It is a dummy variable equal to 1 if SDC reports acquirer firm's public status as "Public" and 0 otherwise. (Source: SDC Mergers & Corporate Transaction Database)
Toehold Dummy	It is a dummy variable equal to 1 if acquirer owns non-zero percentage before the transaction announced and 0 otherwise. (Source: SDC Mergers & Corporate Transaction Database)

Financial Acquirer	It is dummy variable equal to 1 if SDC reports the acquirer as financial acquirer and 0 otherwise. (Source: SDC Mergers & Corporate Transaction Database).
Friendly Deals	It is a dummy variable equal to 1 if SDC report attitude of M&A deal as "Friendly" and 0 otherwise. (Source: SDC Mergers & Corporate Transaction Database)
Firm Characteristics	
Firm Size	Natural log of dollar value of total assets of firms.
Return on Equity	It is calculated by dividing operating income before depreciation with total common shareholders equity of firms. (Source: Author calculations)
Debt to Equity	It is calculated by dividing net debt (total liabilities – cash – cash equivalents) with common shareholders equity. (Source: Author calculations)
Sales Growth	Sales of current year minus sales of previous year and divided by previous year sales. (Source: Author calculations)
Book Value Per Share	It is calculated by dividing common equity liquidation value (CEQL) divided by common shares outstanding. (Source: Author calculations)
Country Level Characteristics	
GDP	Logarithm of annual gross domestic product (GDP) of the target countries (in US Dollars) (Source: World Bank Development Indicators)
GDP Growth	Annual growth rate of GDP of the target countries. (Source: World Bank Development Indicators)
GDP Per Capita GDP	Logarithm of annual gross domestic product per capita of the target countries (in US Dollars). (Source: World Bank Development Indicators)
Market Cap. % of GDP	Percentage of market capitalization of listed companies to the total GDP of target countries. (Source: World Bank Development Indicators)
Openness	Sum of exports and imports of goods and services as share of GDP of target countries. (Source: World Bank Development Indicators)
Investment Profile	It is measured by adding three sub-components of the political risk ratings of International Country Risk Guide (ICRG). Subcomponents include (i) risk of expropriation or contract viability (ii) payment delays and (iii) repatriation of profits. Each subcomponent is scaled from zero (very high risk) to four (very low risk). (Source: ICRG Guide)
Bureaucratic Quality	It is measured through assessment of the institutional strength and quality of the bureaucracy is another shock absorber that tends to minimize revisions of policy when governments change. It is scaled from zero (poor bureaucratic quality) to six (strengthened bureaucratic quality). (Source: ICRG Guide)
Corruption	It is measured through assessment of corruption within the legal system of countries. It is scaled from zero (very high corruption) to six (very low corruption). (Source: ICRG Guide)
Law & Order	It measured by adding two subcomponents, law and order. To measure the strengths of 'law' component, impartiality of legal system is taken into account and to evaluate 'order', it is observance of law. Each subcomponent is scaled from zero (poor law and order conditions) to three (better law and order conditions). (Source: ICRG Guide)
Anti Self-Dealing Index	It is a survey-based index created to measure of the legal protection of minority shareholders against expropriation by corporate insiders of acquirer nation. Source (DLLS (1998))
Anti Directors Rights	It is calculated by combining six measures (proxy by mail allowed, shares not blocked before meeting, cumulative voting, oppressed minority, preemptive right to new issues, % share capital to call ESM) into an anti-director rights index. Each variable for anti-director rights is a dummy variable that takes the value 1 if a right is mandated, and 0, otherwise. The score for the index is obtained by adding the dummy variables for the six rights. (Source: Djankov et al. (2008))
Disclosure Quality	It is the index created to measure the quality of disclosure of accounting information of the companies' 1990 annual reports of acquirer nation by International Accounting and Auditing Trends, Center for International Financial Analysis &Research, Inc. (Source: La Porta et al. (1997,1998)
Country Pair Characteristics	
Same Legal Origin	It is a dummy variable equal to 1 if acquirer and target countries legal origin is same and 0 otherwise. (Source: La Porta et al. (1998))
Exchange Rate Volatility	Standard deviation of the exchange rates between acquirer county and target country from 36 months upto 1month prior to deal announced date. (Source: DataStream)
Real Interest Rate	The difference between real interest rate of acquirer country and target country. (Source: World Bank Development Indicators)

General Conclusion

The starting point of the thesis was the aspiration to uncover the effects of institutions on mergers and acquisitions activity worldwide. Understanding key determinants of M&A activity has been an important area of research but researchers mainly focused on US market despite the fact that M&A activity has become an important part of market economy around the world. Countries differ significantly in their economic outcomes which can be better explained by the institutional differences (North: 1990). The main hypothesis is that differences in formal and informal institutions – of the countries where firms are located – to a large extent shape the strategic behaviors of the firms. This dissertation proceeds in testing this hypothesis along three chapters.

The first chapter investigates the effects of labor market institutions, defined as collective bargaining, on mergers and acquisitions. More specifically, how does collective bargaining system – at national level – affects the size and dynamics of M&A activity around the world. Following labor economics literature, I use union density and bargaining coverage indicators to capture the collective bargaining. Using large sample of 32,912 domestic and cross-border M&A transactions by listed firms in 46 countries between 1992 and 2010, I show that countries' collective bargaining system is an important determinant of M&A activity. I find that collective bargaining is positively and significantly related with takeover activity at industry and country level analyses, after controlling for industry and country characteristics and saturating dense sets of fixed effects. The size of the effect is economically significant. To tease out the story, I investigate the cross-sectional heterogeneity of the relationship. I show that the positive relation between collective bargaining and takeover activity is strong in labor intensive industries, where labor is an important input of production. Workforce restructuring is also key source of synergy gains. Additionally, I find the greater wealth transfer from employees to shareholders of target firms located in high collective bargaining countries.

Second and third chapters of the thesis investigate effects of culture on different M&A outcomes. First, I study the international M&As from cross-cultural perspective, particularly I identify which cultures are likely to undertake cross-cultural acquisitions and which cultures are more likely to complete announced transactions. I use one of the most recent and comprehensive GLOBE culture

framework which divides the societies into 10 different culture clusters based upon cultural similarities, language, religion and historical accounts which allows me to effectively identify cross-cultural M&A transactions. Using large sample of (1) 410,467 domestic and cross-border M&A transactions by 175,676 acquiring firms at country level analysis and (2) 129,454 M&A deals by 31,389 acquiring firms at deal level analysis, from 62 countries between 1990 – 2009, I find that acquirer countries' culture dimensions explain the likelihood of cross-cultural M&A transactions and of deal completion. I show that the countries that emphasize on result-oriented and traditional-oriented culture dimensions and discourage people-oriented culture dimension are more likely to undertake cross-cultural acquisitions. Further, result-oriented and traditional-oriented cultures are less likely to complete announced M&A transactions while people-oriented culture dimension increases the probability of completing the announced deals. Additionally, cross-cultural acquisitions increase probability of deal completion. The results are robust to deal-level, firm-level and country-level characteristics, and including year and industry fixed effects. Results remain unchanged when I aggregate the analysis at country-level.

Second, I study the effects of culture from target countries' perspective. In particular, I explore which cultures are more likely to become targets and how does cultural values of shareholders explain the CAR around announcement dates. I use 12,027 M&A transactions by 9,375 target firms across 39 GLOBE countries and analyze the probability of firms becoming targets on 335,445 firm-year observations. I show that target countries' culture has significant effect on M&A activity. I find that firms located in result-oriented culture are less likely to become targets and firms from traditional-oriented and people-oriented-oriented cultures are more likely to become targets. I further show that result-oriented cultures experience higher CAR while traditional-oriented and people-oriented-oriented cultures experience lower CAR around announcement dates.

The thesis is a part of growing field of literature investigating the role of institutions in economic decision making and particularly to the stream of literature exploring the effects labor market institutions and national culture in M&A context. I conclude that besides employment protection laws, collective bargaining system of the countries have pronounced effects on takeover decisions. Further, I contribute to the broader literature on international M&A by showing that cultural ties

play an important and economically significant role in the economic decisions of managers by showing that cultural values of acquirer and target countries, both are at play in explaining the variations in merger outcomes. Institutional environment of the country determines the particular type of firms.

Taken together, findings of the thesis offer new insights on the issue, by showing effects of institutional arrangements on different M&A outcomes through cross-country analyses but at same time it does suffer the potential limitation. The proxies used for collective bargaining and culture are the indices, developed at country-level. Due to comparability and availability of the data, I am restricted to use country-level proxies which may affect my ability to take into account all the variations at the firm-level. Further investigating the issue at the firm-level requires a lot of data efforts on the cultural background of CEOs to capture the cultural values and plant-level and contract-level data to identify the strengths of the labor union, but this presents a fertile avenue of future research.

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Appendix:

The appendix summarizes the key findings of related literature.

Authors	**Sample**	**Period**	**Key Findings**
Formal Institutions and Mergers and Acquisitions			
Rossi and Volpin (2004)	45,686 M&A transactions across 49 Countries	1990 – 1999	• Volume of M&A activity is larger in the countries with better accounting standards and stronger shareholder protections. • Negative relationship between likelihood of all-cash deals and level of shareholder protections of acquirer countries. • In cross-border mergers, targets are from the countries with weaker investor protection which suggest that cross-border transactions play a governance role by enhancing the corporate governance standards of target firms.
Bris, Brisley and Cabolis (2008)	7,330 cross-border mergers across 41 Countries	1990 – 2001	• Tobin's Q of firms within that industry increases when the firms are acquired by foreign firms from the countries that have better investor protection and better accounting standards.
Martynova and Renneboog (2008)	2,419 M&A deals from 29 European countries	1993 – 2001	• Differences in corporate governance – measured by shareholder, minority shareholder and creditors protection indices – between acquirer and target countries impact the merger returns.

Bris and Cabolis (2008)	506 cross-border acquisitions across 39 countries	1989 – 2002	• Better shareholder protection and accounting standards in the bidders' country leads to higher acquisition premium in cross-border acquisitions relative to matched sample of domestic acquisitions.
Starks and Wei (2013)	5,056 M&A transactions which includes 371 cross-border mergers	1980 – 1998	• Merger premium is negatively associated with the quality of corporate governance of acquirer countries for the transactions completed with stock, which indicates that foreign acquirers compensate the shareholders of US target firms for their exposure to weaker corporate governance system. • Acquirers' cumulative abnormal returns around announcement date increase with the quality of corporate governance in stock offers and that foreign acquirers with better corporate governance system are likely to make stock offers.
Buch and DeLong (2004)	3,000 bank M&As	1985 – 2001	• Information cost reduces the volume of cross-border bank mergers and regulating differences also affect the cross-border mergers and acquisitions activity
Focarellia and Pozzolob (2008)	403 cross-border M&As by financial companies across 47 countries	1990 – 2003	• Internationalization strategy of the firms globally follows the same patterns. • Geographical distance, economic and cultural factors explain the patterns of internationalization of the firms. • Geographical distance, and cultural and economic integration play a key role in the financial companies' expansion abroad.

Ferreira, Massa and Matos (2010)	786 cross-border M&A transactions from 26 countries	2000–2005	• Presence of foreign institutional ownership is positively and significantly related to the cross-border mergers and acquisitions activity across the world. • Foreign institutional ownership enhances the likelihood that M&A transaction is cross-border, successful, and acquirer takes control of target firms. • Positive relationship between foreign institutional ownership and merger outcomes is stronger in countries with the weaker legal institutions and less developed capital markets
Bris, Cabolis and Janowski (2010)	62,119 M&A transactions in 41 countries	1990 – 2001	• Countries adopting anti-trust laws experience an increase in aggregate mergers and acquisitions activity.
Lel and Miller (2015)	41,792 M&A transactions across 34 countries	1992 – 2003	• Countries adopting takeover laws experience an increase in aggregate mergers and acquisitions activity.
Erel, Liao and Weisbach (2012)	56,978 cross-border M&As from 48 countries.	1990 – 2007	• In addition to the factors that motivate the domestic mergers and acquisitions activity, additional factors including geographical proximity, quality of accounting disclosure and bilateral trade increase the probability of cross-borders M&As. • Firms from countries who observed increase in stock market in value, appreciation of currency and relative increase in market-to-book ratio are

			also more likely to be acquirer and firms from poor performing countries tend to be target.
Lin, Officer and Shen (2014)	12,030 M&A transactions in 62 countries	1996 – 2012	• Acquirers from countries whose currency experience large appreciation experience significantly high and positive CAR around the announcement date and post-merger period. • Positive relation between currency appreciation and CAR is stronger in acquirer countries with strong shareholder protection and acquirers with better corporate governance. • Acquirers from countries with weaker shareholder protection lean to pay excessively to foreign target firms following a currency appreciation.
Brockman, Rui and Zou (2013)	509 M&A transactions from 22 countries	1993 – 2004	• Political connections of acquirer firms play an important and economically significant role in post-merger takeover performance and the nature of this relationship depends on the institutional environment of the countries. • Politically connected acquirer firms underperform the non-connected firms located in countries with strong legal system or low level of corruption and on the other hand, politically connected bidder firms outperform the non-connected in the countries with weaker legal system or high level of corruption.

Serdar, Dinc and Erel (2013)	415 M&A transactions	1997 – 2006	• Economic nationalism is a widespread phenomenon in which government has strong preference for the domestic M&A transactions rather cross-border mergers. • These preferences are pronounced in times and countries that have far-right parties and weaker government.
Karolyi and Taboada (2015).	7,296 bank M&A transactions in 78 countries.	1995 – 2012	• Acquirers tend to be from the countries with stringent capital requirements, high restrictions on bank activities and stronger supervisions. • Target firms' cumulative abnormal returns are higher and larger when the acquirers are from the countries with stricter capital requirements, better private monitoring and high restrictions on banking activities.
Labor Market Institutions and Mergers and Acquisitions			
Becker (1995)	300 large US M&A transactions	1982 – 1986	• Unionized target firms enjoy higher takeover premium from M&A activity than that the non-unionized target firms. • These higher gains enjoyed by shareholders reflected as re-appropriation of employee 'rents'.
Li (2012)	in 4000 US acquired firms.	1981 – 2002	• Target firms with strong labor unions show more shrinkage in wage and employment after a takeover than the comparable firms. This indicates that employees of target firms are negatively affected by takeovers and that labor unions do not protect them from these negative effects.

Tian and Wang (2014)	8,092 US M&A transactions	1978 – 2009	• Barely unionized firms receive less takeover bids, enjoy lower announcement returns and receive lower offer premium.
John, Anzhela and Diana (2015)	13,838 US M&A deals	1985 – 2009	• Acquirers with strong labor rights experience lower announcement returns. They attribute the effect to such acquirers pursuing deals that are not in the best interest of the acquirer's shareholders, consistent with employee-shareholder agency conflicts limiting shareholder gains and synergies from the acquisition.
Alimov (2015)	53,583 cross-border M&A transactions in 28 countries	1991 – 2009	• Strict employment protection regulations in target countries are linked with higher level of cross border takeover activity especially when acquirers are from countries with lesser employment protection. Institutional environment of the country ascertains the existence of particular type of firms. Acquirers intend to carefully select the target firms from the right host country.
Levin, Lin and Shen (2015)	11,425 cross-border M&As across 50 countries	1991 – 2012	• Acquirer firms experience lower CAR around announcement date and profits when the targets are located in the countries with higher employment protection afforded by strict employment protection laws. • The results are more pronounced in high labor-intensity and high labor volatility industries. • Acquirers make fewer and smaller M&As with the target firms located in the countries with strong employment protection laws.

Dessaint, Gobulov, and Volpin (2015)	45,696 M&A transactions across 21 OECD countries.	1985 – 2007	• Stronger employment protection reduces takeover activity, combined firm gains and takeover premium. • Employment protection hinders the layoffs after takeover and the takeovers with potential for labor force reorganization represent a significant reduction in net synergies.
Informal Institutions and Finance			
Grinblatt and Keloharju (2001)	93 Finnish public firms.	1994 – 1997	• There is high probability that investors hold, buy and sell the stocks of Finnish firms that have higher familiarity with them, and they attribute the familiarity to geographical distance (located close to the investors), culture (CEOs of the same cultural backgrounds) and language (speak their native language). • These three familiarity attributes explain the investors' preferences for certain stocks.
Stulz and Williamson (2003)	49 countries.	1993	• Catholic countries protect the creditors' rights less effectively than protestant countries.
Guiso, Sapienza and Zingales (2008)	12 countries.	Multiple years.	• Less trusting individuals are less likely to buy stocks.
Chui, Titman and Wei (2010)	55 countries	1980 – 2003	• Individualism culture dimension is positively linked with trading volume and volatility as well as the magnitude of momentum profits.

Beugelsdijk and Frijns (2010)	26 countries	1999 – 2002	• Uncertainty avoidance countries allocate funds less to foreign market and individualistic countries are more aggressive in foreign assets allocation. • Cultural distance between two countries also affect the amount of allocation to that market.
Anderson, Fedenia, Hirschey and Skiba (2011)	60 countries.	2006	• Uncertainty avoidance countries exhibit greater home bias and diversify less in their foreign holdings; investment funds from countries with higher masculinity and long-term orientation in their culture exhibit lower home bias and investment funds from countries emphasizing masculinity diversify more abroad. • The size of effect is economically significant and ascertain the fact that culture directly affect the investors' behaviors rather than indirect effects (for example through legal and regulatory framework).
Siegel, Licht and Schwartz (2011)	50 countries	1995 – 2008	• Distance between countries on egalitarianism culture dimension strongly and negatively influence the inter-country flows of bond and equity issuance, syndicated loans and cross-border M&As.
Zheng, El Ghoul, Guedhami and Kwok (2012)	40 countries	1991 – 2006	• Countries that emphasize on individualism, masculinity, power distance and uncertainty avoidance culture dimensions are likely to use more short-term debt after controlling for the formal constraints including legal, political, financial and economic institutions.
Aggarwal, Kearney and Lucey (2012)	174 countries.	2001 – 2007	• Cultural traits (individualism, masculinity, power distance and uncertainty avoidance) of originating and destination nations, and cultural distance

			between originating and destination nations, interact with geographical distance and gravity variables to ascertain the foreign portfolio investment patters across the world.
Li, Griffin, Yue and Zhao (2013)	35 countries.	1997 – 2006	• Individualism culture dimension is positively related with corporate risk taking while uncertainty avoidance and harmony are negatively related to corporate risk taking. • Greater earning discretions reinforce the relationship and that larger firm size weakens the relationship between culture and corporate risk taking.
Lievenbrück and Schmid (2014)	50 countries	2000 – 2009	• Long-term oriented countries are less likely to hedge and have lower hedged volume. • They observe lesser volume of hedging with options in the countries that emphasize on masculinity in their culture. • They conclude that culture has strong effect on firms hedging decisions and that the size of the impact is economically large such that it cannot be explained by other economic and institutional differences across countries.
Holderness (2014)	32 countries	Multiple years.	• Ownership of the listed firms becomes more concentrated in the societies that have strong preferences for being equal in treatment in contrast to hierarchical treatment of individuals.
Kwok and Tadesse (2006)	41 countries.	-	• The countries emphasizing uncertainty avoidance culture dimensions in their culture are likely to have bank-based system.

Cline and Williamson (2015)	71 countries.	Multiple years.	• Trust in strangers is negatively and significantly related to formal self-dealing regulation
Griffin, Guedhami, Kwok, Li and Shao (2014)	38 countries.	2006 – 2011	• Firms located in the countries that emphasize on individualism culture dimension and discourage uncertainty avoidance in their culture are positively and significantly linked with firm level corporate governance practices.
Eun, Wang and Xiao (2015)	47 countries.	1990 – 2010	• Stock prices tend to move together in culturally tight and collectivistic countries, similarly, stock prices move less together in culturally loose and individualistic countries. • Trade and financial openness status of the countries weakens this relationship.
Chen, Dou, Rhee, Truong and Veeraraghavan (2015)	41 countries.	1989 – 2009	• Uncertainty avoidance countries tend to hold more cash and individualistic countries are more likely to hold less cash. • Within United States, firms located in high uncertainty avoidance states hold more cash and the firms located in the states emphasizing on individualism hold less cash. • Individualism is positively and significantly related to capital expenditures, M&As and repurchases while uncertainty avoidance has strong and negative relationships.
Pevzner, Xie and Xin (2015)	25 countries.	1995 – 2008	• They find strong market reactions for the corporate earnings announcements made by firms located in countries with high level of trust.

			These results suggest that same earnings announcements made by firms can be taken differently across different countries depending on their culture. • They further show that the positive effects of country's level of trust on market reaction is more pronounced in the countries with weaker investor protection and disclosure requirements which means that trust act as a substitute to the country's formal institution.
El Ghoul and Zheng (2015)	51 countries.	1992 – 2012	• Trade credit provisions are higher in countries that emphasize on power distance, uncertainty avoidance, masculinity and discourage individualism in their culture.
Dodd, Frijns and Gilbert (2015)	45 countries.	1985 – 2006	• Firms from developed nation tend to cross-list with in the countries with cultural similarities. • Cultural distance on uncertainty avoidance and individualism affect the firms' cross-listing decisions.
Culture and Mergers and Acquisitions			
Ahern, Daminelli and Fracassi (2015)	104,652 mergers with 20,893 cross-border mergers and 83,759	1985 – 2008	• Differences in national culture reduce the volume of cross-border mergers, while controlling for a host of other possible determinants. Greater is the distance between two countries along each of the three cultural dimensions, the smaller is the volume of cross-border mergers between the countries.

	domestic mergers from 52 countries.		• Greater cultural distance also leads to lower synergy gains, as proxied by the combined announcement returns of acquirers and targets.
Frijins, Gilbert, Lehnert and Tourani-Rad (2013)	25,750 M&A transactions from 39 countries	1990 – 2008	• They show strong negative relation of uncertainty avoidance with diversifying international mergers and acquisitions activity. • Acquirers from high uncertainty avoidance countries requires higher premium and show that effect of uncertainty avoidance cultural trait is more pronounced in large takeovers.
Lim, Makhija and Shenkar (2015)	1,690 US cross-border M&A transactions across 45 countries.	1990 – 2009	• US acquirers pay less premium to foreign targets with greater culture distance measured by Hofstede' culture framework but this phenomenon does not hold for foreign acquirers paying US targets. • The negative effect of culture distance is wiped out when the bidders are more familiar with target country's culture.

Institutions et les fusions et acquisitions internationales

Résumé

Quels sont les effets des institutions du marché du travail et de la culture nationale sur l'activité en matière de fusions et acquisitions ? Cette thèse propose d'apporter des réponses à cette question tout au long de trois chapitres. Le premier chapitre s'intéresse aux effets des institutions du marché du travail, sous l'angle de la négociation collective, sur ces opérations. Il met en évidence que les fusions et acquisitions augmentent en nombre avec la force des syndicats et la capacité de négociation des employés des pays. La négociation collective accroît l'activité en fusions et acquisitions parce que les acquéreurs potentiels peuvent retirer des gains d'opportunité plus élevés en s'appropriant les montants des « rentes » accaparées par les employés. Les chapitres deux et trois étudient comment les cultures nationales affectent les résultats des opérations de fusion et acquisition. Ils montrent que les firmes de pays fortement « orientés vers la quête de résultats » ont moins tendance à réaliser des fusions transfrontalières, à mener à terme les négociations annoncées et à devenir cibles. Quand ces opérations ont lieu, les cibles connaissent des rendements anormaux cumulés élevés à l'annonce de l'opération. Les firmes appartenant à des pays « orientés vers la tradition » ont moins tendance aussi à réaliser des fusions transfrontalières, à mener à terme les négociations annoncées et à devenir cibles. Quand ces opérations ont lieu, les cibles connaissent des rendements anormaux cumulés plus faibles à l'annonce de l'opération. Les firmes appartenant à des pays « orientés vers les personnes » ont plus tendance à réaliser des fusions transfrontalières et à mener à terme les négociations annoncées.

Mots clefs français : Institutions, fusions et acquisitions, marché du travail, cultures nationales

Institutions and International Mergers and Acquisitions Activity

Abstract

What are the effects of labor market institutions and national culture on mergers and acquisitions activity? The thesis proceeds in answering this question along three chapters. The first chapter investigates the effects labor market institutions defined as collective bargaining on mergers and acquisitions (M&A) activity. It provides evidence that M&A activity increases in countries with strength of labor unions and high bargaining coverage. Collective bargaining increase M&A activity because potential acquirers have greater gains opportunities sourced from reappropriation of employee 'rents'. Second and third chapters explore effects of national culture on different M&A outcomes. They show that firms from result-oriented countries are less likely to make cross-cultural acquisitions, to complete announced deals, to become targets, and target firms experience higher CAR around announcement date. Firms from people-oriented countries are less likely to make cross-cultural acquisitions, to complete deals and are more likely to become targets and target firms experience lower CAR. Firms from people oriented countries are more likely to make cross-cultural acquisitions and complete announced deals.

Keywords : Institutions, Mergers and Acquisitions, Labor Market, National Culture

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