Geography of Stock Markets

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Abstract
Geography matters for stock markets. Stock market actors and institutions do not just have to be somewhere, but where they are in relation to other actors and institutions has an effect on their behaviour and performance. Hence, the geography of stock markets is crucial to the spatial distribution of financial services and centres. On another level, the evolution and structure of stock markets involves a complex interplay of politics, technology, economy and culture, and can never be explained with economic models alone. Finally, stock markets do not just reflect economy and society, they influence how economy and society work. The current financial crisis only underscores the value of geography as a lens through which to view stock markets, and the significance of the latter in the world economy.

Introduction
There are stock markets in over 110 countries, with tens of thousands of companies listed and traded, and their combined market value comparable with the world’s GDP (Dimson et al. 2002). Stock exchanges, while slowly ceding their role as flagship institutions of national economies, remain powerful symbols of globalising capitalism. Dow Jones or FTSE are household names, and rarely a day goes by without stock market news making top headlines in media. Stock markets clearly matter, but why would geography of stock markets matter?

To start with, stock markets have a geography, as the size and role of stock markets vary significantly across the world. Consider the top 20 countries according to the market value of listed stocks (referred to as market capitalisation) in Table 1. Some countries such as Japan, the Netherlands, South Africa and Singapore punch much above their weight, with very high ratios of market capitalisation to GDP. Singapore in fact has more stock market traded firms than Italy and Spain put together. Second, actors and institutions that make up stock markets, with corporations and investors in the lead, do not function in virtual space, and geography, proximity, and even physical distance matter to them. As such stock markets affect financial centre formation, urban hierarchy and networks. Last but not least, stock market development has implications for the functioning of domestic and international economy.
The significance of stock markets for geography of the world economy is highlighted in the conditions of the global financial turmoil. The growth of stock markets has been part and parcel of the unprecedented expansion of financial markets into the affairs of firms, public organisations and the livelihoods of ordinary people (Langley 2008; Martin 2002). Although the crisis was triggered by the bursting house price bubble in the USA, the latter was preceded and arguably reinforced by the stock market bubble of the 1990s, corrected only partially in 2000–2002 (Shiller 2008). The collapse of stock prices since the summer of 2008, wiping off approximately USD15–20 trillion from global markets, does not simply reflect the ailing economy, but deepens the crisis itself. Without understanding stock markets, geographers will not understand the crisis or its implications.

The objective of this paper is to review the literature exploring the intersection between stock markets and geography, a bulk of which comes from financial economics and economic geography; including the author’s own research. The paper starts by introducing the basic terms and building blocks of stock markets and their environment, woven into the briefest history of stock markets possible. The following section explains how, in

<table>
<thead>
<tr>
<th>Country</th>
<th>Market capitalisation (billion $)</th>
<th>% of total</th>
<th>% of GDP</th>
<th>Number of domestic listed firms</th>
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<tbody>
<tr>
<td>USA</td>
<td>17,001</td>
<td>40.6</td>
<td>136</td>
<td>8861</td>
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<tr>
<td>Japan</td>
<td>7543</td>
<td>18.0</td>
<td>167</td>
<td>3858</td>
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<td>UK</td>
<td>3058</td>
<td>7.3</td>
<td>139</td>
<td>2542</td>
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<td>France</td>
<td>1759</td>
<td>4.2</td>
<td>83</td>
<td>946</td>
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<td>Canada</td>
<td>1482</td>
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<td>China</td>
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<td>Germany</td>
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<td>India</td>
<td>1069</td>
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<td>132</td>
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<td>Spain</td>
<td>960</td>
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<td>198</td>
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<td>Switzerland</td>
<td>935</td>
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<td>Australia</td>
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<td>Italy</td>
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<td>Korea</td>
<td>718</td>
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<td>The Netherlands</td>
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<td>South Africa</td>
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<td>Taiwan</td>
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<td>Brazil</td>
<td>475</td>
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<td>Sweden</td>
<td>438</td>
<td>1.0</td>
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<td>Belgium</td>
<td>289</td>
<td>0.7</td>
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<td>159</td>
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<tr>
<td>Singapore</td>
<td>257</td>
<td>0.6</td>
<td>215</td>
<td>564</td>
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Source: Author’s calculations based on data from the World Federation of Exchanges (www.world-exchanges.org).
spite of the ongoing globalisation of stock markets, location remains important for stock market actors and their interactions, leading to the concept of stock market centres, constituting an integral part of financial centres. Next, the paper moves on to the role of stock markets in economy and society, contrasting arguments put forward in favour and against the expansion of stock markets. The concluding section reflects on the future of stock markets and possible directions for research thereon.

Development of stock markets

Stock markets are markets where stocks are sold and bought. Stocks (or shares) are issued by companies and sold to investors in order to raise capital. In contrast to debt, capital collected via issuance of shares does not ever need to be returned. Stockholders (or shareholders) are co-owners of the company, and have the right to influence corporate decision-making by exercising their votes at shareholders’ meetings, the right to collect dividends (a part of company profits paid out to shareholders), and in case of the company going bankrupt, the right to obtain a share of proceeds from the sale of corporate assets left over after the repayment of debts. In addition to common stocks (ordinary shares), which give owners one vote each and identical dividend rights, companies can issue preferred shares, with multiple votes and/or special dividend rights. When stocks are bought from the company that issues them, we refer to such transactions as the primary stock market. Shares sold and bought between investors and traders themselves constitute secondary stock markets (Mishkin 2007).

The existence of a stock market requires the existence of companies that issue stocks, known as joint-stock companies or corporations. The first joint-stock companies were created in the early seventeenth century, including the Dutch East India Company, which by 1617 had 954 shareholders (Davies 1961). This and other pioneering corporations were given charters by the state, and acted as prime agents of colonial expansion. Free incorporation, removing the need for government to authorise the purposes of a corporation, became widespread only in the nineteenth century, and achieved the greatest scale in the USA, where it played a prominent part in raising capital for the rise of the USA to industrial power (Braithwaite and Drahos 2000). Indeed, the expansion of corporations transformed the whole economy, as it no longer needed to rely on family firms. In contrast to the latter, corporations could mobilise capital from thousands, and with time millions of scattered investors, and were not dependant on the life span of any particular owner. They were much less restricted by space and time.

Primary stock markets cannot survive without secondary markets, where investors trade shares and thus modify their investment portfolios. Trading can take place directly between investors, on an over–the–counter (OTC) market, but an overwhelming share of it became centralised in meeting places of professional stock traders, who collect orders from investors or trade
on their own account. The concentration of trading in space and time, making it easier for traders to find a counterpart, judge their reputation and exchange information, led to the creation of stock exchanges, with lists of stocks being traded and trading rules established (Laulajainen 2003). Firms listing their shares on a stock exchange for the first time are referred to as going public, a process mostly combined with the issuance of new shares known as the Initial Public Offering (IPO). The first major stock exchange was established in Amsterdam in 1602 in order to trade the stocks of the Dutch East India Company. The London Stock Exchange (LSE) emerged as the premier market when French troops invaded Amsterdam in 1795, and maintained its dominance (though periodically heavily contested by the Paris Bourse) until 1914, when the New York Stock Exchange (NYSE) took over (Braithwaite and Drahos 2000).

With free incorporation taking hold in Europe and North America, in the mid-nineteenth century the supply of new corporations was large and stock exchanges were plentiful. The USA had hundreds and large European countries tens of them (Michie 2008). Each major city had a stock exchange, where local investors traded the shares of local companies. The popularisation of telegraph and the invention of telephone brought an end to the fragmentation of stock markets, as information relevant to stock prices could now be collected from far away and acted upon quickly. A parallel trend was the growth of corporations, operating increasingly on a national and international scale. Consequently, in late nineteenth and early twentieth century local and regional stock exchanges were decimated in all but very large economies. National stock markets were forged, with national indices and systems for the clearing and settlement of transactions (Franks et al. forthcoming). The period between 1900 and 1914 also witnessed a significant market for cross-border stock transactions, primarily within Europe and between Europe and North America, e.g. with British investments in the US railway corporations.

The main function of the stock market is to establish the value of corporate shares. A large number of transactions, i.e. a high liquidity of a stock market, contribute to the process of price discovery. Financial return from holding shares consists of dividends and the appreciation of share price, i.e. capital gain (Solnik 1999). Thus, the estimation of a share price requires at the very least predictions about the future profitability of the firm, which in turn involves guesswork about the future condition of the entire economy. There is no upper limit on a share price, while the bottom limit is zero. This is why investments in stocks are risky, and in the long run should be more profitable than relatively safe investments, such as government bonds. Between 1900 and 2000 the US stock markets, for example, have yielded an arithmetic average of 8.7% per year above inflation, with the standard deviation of 20.2%, compared to US bonds with real returns of 2.1% per year and standard deviation of 10% (Dimson et al. 2002). As a corollary of high risk and high potential return stock markets are affected
by investor sentiment and irrational behaviour, resulting in a cycle of booms and busts, with the bursting of the Internet boom in 2001 being a recent example (Ferguson 2008; Shiller 2005).

Although the birth and development of stock markets have been facilitated by legal inventions and the state, it was the Great Depression in the USA, triggered by the stock market crash of 1929, which provided a milestone in the regulation of stock markets. As a part of New Deal, the Securities and Exchange Act was passed in 1933, followed by the establishment of the Securities and Exchange Commission in 1934, which introduced strict entry requirements for companies willing to list their shares on stock exchanges, reporting duties for those listed, and a separation of investment from universal banking in order to insulate the latter from the vagaries of the stock market. The US model of stock market regulation spread (though with significant modifications) to many parts of the world. Many countries used it as best practice, and Japan, for example, was persuaded to adopt it in late 1940s by the US military authorities (Braithwaite and Drahos 2000). Thus, while until 1930s stock exchanges operated largely as private clubs of traders, they emerged from 1940s as government controlled, semi-public institutions, granted a near-monopoly on organising stock markets in their countries (Michie 2008).

The world of national and monopolistic stock exchanges started to crumble in late 1970s, and since then we have witnessed a gradual globalisation of stock markets. The rising multi-national enterprises have started listing on foreign exchanges to tap into new pools of capital and increase their visibility (Karolyi 2006). Institutional investors, including pension funds, have developed a huge demand for and means to diversify their portfolios internationally (Clark 2000). Stock exchanges themselves have been deregulated (though to various degrees in different countries), exposing them to international competition. New technology has again been proven crucial, as computer networks have removed the necessity of traders meeting in one place, enabled an automatic processing of orders, and revolutionised investors’ access to information. This has made virtual trading possible, and has questioned the raison d’être of stock exchanges. In response, many stock exchanges have become private publicly listed companies, engaged in international mergers and alliances, and redefined themselves as IT businesses selling listing services to issuers and information services to investors (Budd 1995; Lee 1998).

The globalisation of stock markets has also involved their regulation. With companies issuing and listing shares, and investors trading on an increasingly international basis, the demand has arisen to coordinate various national rules on listing, disclosure and illegal trading practices, as well as to integrate clearing and settlement systems to ensure quick and inexpensive cross-border payments and transfers of share ownership. The International Organisation of Securities Commissions was established in 1983, and has been instrumental in promoting the application of the International Financial Reporting
Standards (formerly known as International Accounting Standards) commonly applied by firms around the world, and adopted as compulsory for listed companies in the European Union in 2005 (Braithwaite and Drahos 2000). Some steps have also been undertaken, particularly within the EU, towards the coordination of listing rules as well as clearing and settlement. To be sure, it is a heavily contested process. Stock market integration lies at the core of capital market integration, and opinions on the desired extent and speed of this process differ between countries and stakeholders (Story and Walter 1997). We will return to this issue in the section on the role of stock markets in economy and society, while the following section deals with the continued significance of geographical location in stock markets.

**Localisation of stock markets**

The recent history of stock markets may appear as another chapter in a familiar story of economic globalisation. This section will argue, however, that globalisation and apparent virtualisation of stock markets does not make location less important. This argument will be supported with evidence focusing on the behaviour of issuers and investors.

The very fact that companies cross-list their shares abroad in order to tap into foreign capital pools or increase their visibility suggests that national stock markets are far from integrated. According to the World Federation of Exchanges at the end of 2007 there were approximately 3300 cross-listings in the world, not to count thousands of firms with stocks traded on foreign OTC markets. In choosing overseas listing venues, firms are affected by distance and cultural proximity. While the US exchanges nearly monopolise cross-listings from Americas, firms from India, South Africa or Australia cross-list mostly on the London Stock Exchange (Sarkissian and Schill 2004). It is also remarkable that trading in cross-listed firms tends to sticks stubbornly to the exchange in the home country (Halling et al. 2007). When Nokia listed on the NYSE in mid-1990s, the latter captured 80% of its trading volume, but within a couple of years trading returned to the Helsinki Stock Exchange (Jokivuolle and Lanne 2004).

Evidence on the continued significance of location can also be found when analysing listing decisions within countries. Loughran and Schultz (2006) show that US firms from rural in relation to urban areas wait longer to list their shares on a stock exchange, are less likely to conduct equity offerings while listed, use lower quality intermediaries in IPOs, and have more debt in their capital structure. Wójcik (2008a) extends these findings, demonstrating that firms from financial centres are more likely to go public than their provincial counterparts. This phenomenon, referred to as the financial centre bias, holds in an absolute majority of European countries, the USA and Japan. In the UK and France a large firm (with turnover of at least €50 m in 2006) is 26% and 86% more likely to be listed if it is
Headquartered in London or Paris, respectively. There are benefits of issuers’ proximity to stock market intermediaries, investors and specialised labour markets found in financial centres. Listed companies require services of investment bankers, auditors, lawyers, intensive relationships with institutional investors, and need to employ investor relations experts, accountants and other professionals with skills specific to listed companies. Second, if the manager of a provincial firm going or being public is unsuccessful, she/he faces the threat of losing a job and possibly reputation in a small labour market and generally smaller social environment. Thus, the potential personal cost of going public may be greater for provincial managers than for those from financial centres.

In addition to issuers, geography has a profound impact on the behaviour and performance of investors. According to the Modern Portfolio Theory, the cornerstone of mainstream financial economics, investors should diversify their investments as widely as possible, moving towards a portfolio with stocks from individual countries held in proportion to their share in the total value of the global stock market (Sharpe 1970). In practice, both individual and institutional investors exhibit a preference for trading and holding of shares of domestic companies, known as ‘home bias’. In 2003, the US investors held more than 85% of their equity portfolio in domestic stocks, while the share of the US stock market in the world market was approximately 45% (Stulz 2005). In addition, investors are more likely to hold and trade foreign stocks from countries with which they have more economic and cultural ties (Portes and Rey 2005). Research explaining ‘home bias’ suggests that investors are not just more familiar with domestic companies, but proximity may afford them superior information about and better understanding of these companies. Shukla and van Inwegen (1995) find that UK mutual fund managers investing in the USA underperform relative to their US colleagues.

‘Home bias’ has an equivalent within domestic stock markets, known as ‘local bias’. There is mounting evidence that within countries, investors tend to trade and hold shares of companies that are headquartered close to the location of investors in question. Coval and Moskowitz (1999) estimate that in the US approximately one in 10 companies in a fund manager’s portfolio is chosen because it is located in the same city as the manager. Ivkovic and Weisbrenner (2005) show that on average a US individual investor holds approximately 30% of his/her equity portfolio in the stocks of companies headquartered within 250 miles, while the share of such firms in the total US stock market is on average only approximately 10%. In Sweden Bodnaruk (2004) documents that when individuals move home they sell stocks of companies from their old locations and buy those from new locations. ‘Local bias’ has also been documented for Finland, Germany and China (for a summary see Wójcik 2009). In analogy with research on ‘home bias’, it has been shown that investors can turn familiarity to their own advantage by gaining superior information in relation to non-local
investors (Hau 2001). Local investors are more likely to have contact with employees, managers and suppliers of the local firms; they may obtain relevant information from local media; they may use the company’s products and services more frequently and be more able to judge their quality. Geographical proximity may help to evaluate intangible factors affecting the stock price, such as management ability, corporate culture or local business climate (Gaspar and Massa 2007).

To be sure, investing domestically or close to home does not guarantee superior stock market returns. Far-away investors may lack local information, but may compensate for it with investment expertise, knowledge of whole corporate sectors, and the knowledge of non-local and global business conditions, all relevant to successful trading. Underscoring the significance of investor sophistication, a review by Malloy (2005) states that in Latin America foreign equity analysts outperform local analysts; in Taiwan foreign analysts with a local research team outperform foreigners without local presence, but also outperform local analysts; while in Europe home country analysts typically outperform foreigners. It would be wrong, however, to reduce secondary stock markets to a battle between local and non-local investors. This picture would miss investors, and stock market intermediaries, including stock analysts, consultants, underwriters, brokers and dealers that try to combine local with global information.

The relationship between issuers and investors is the centrepiece of stock markets, with a crucial geographical dimension to it (Lo and Grote 2002). The two groups benefit and are likely to continue to benefit from co-location, as it facilitates the conduct of transactions, exchange of information, and the use of a common pool of specialised labour. Together with stock market intermediaries the headquarters of issuers and institutional investors form what could be termed ‘stock market centres’: national ones, focused on the links between domestic issuers and investors; and at a higher level international stock market centres, competing for the business of international issuers and investors. To be sure, a stock market centre is not a necessary ingredient of any financial centre. There are financial centres based on activities other than stock markets, for example Dublin with administration and back-office of investment funds, Geneva with private wealth management or Chicago with commodities and derivatives trading (Cassis 2006; Z/Yen 2009).

By their very nature, however, stock market centres are key building blocks of many, including the largest financial centres. First, issuers headquartered in stock market centres generate demand for all types of financial services. Second, stock market intermediaries, including investment banks, have expertise to meet this demand. Third, institutional investors, such as pension funds, represent the largest pools of money in the world (Clark 2000). Historical and contemporary competition between financial centres highlights the significance of stock markets. Toronto, Sydney, and São Paolo, winners of their domestic battles for financial primacy, are stock

Is a stock exchange a necessary ingredient of a successful stock market centre? This is a valid question, given that on an absolute majority of exchanges (with a notable exception of the NYSE) physical trading floor has been replaced with computers matching orders in virtual space (Laulajainen 2003). The answer is no, if a stock exchange is defined as a company focused exclusively on providing computer servers and software for trading. In practice, however, the role of stock exchanges differs between countries. In Poland, for example, the Warsaw Stock Exchange plays an active part in encouraging companies to go public, and still provides a physical meeting place for investors and issuers (Wójcik 2007b). If it ceased to perform these functions, e.g. following a takeover by a foreign exchange, it is conceivable that the primary stock market in Poland, particularly for small, local firms, could suffer (Grote 2007; Klagge and Martin 2005). Amsterdam, Brussels and Lisbon already operate within Paris-headquartered Euronext exchange, but it remains to be seen how this will affect the future of financial sector in these cities (Engelen 2007).

**The role of stock markets in economy and society**

The significance of stock markets extends far beyond the development of financial centres. The size and structure of stock markets have significant implications for the whole economy and society. There are strong disagreements on the virtues and vices of stock markets between mainstream/orthodox economics and more socially oriented research in sociology, political science, geography and heterodox economics.

One characteristic of stock markets, commonly acclaimed by mainstream economists, is their impersonal nature in comparison with bank lending, as an alternative way of channelling capital from savers to firms. Bankers can act in their own interest, at the expense of depositors’ interest, e.g. colluding with managers of borrowing firms. In other situations, banks can exert too much power over borrowers, if the latter do not have any alternative source of financing (Wenger and Kaserer 1998). Stock markets bypass the intermediary, channelling funds to firms directly from the public. In addition, stock markets are seen as enhancing competition between companies. Shares of companies that underperform can be acquired by competitors more easily if they are traded on a stock market. In general, acting impersonally, stock markets are believed to be better than banks at applying the ‘axe’ of creative destruction. Banks, with established long-term relationships with borrowers, are less likely to let them go bankrupt, even if bankruptcy is justified (Rajan and Zingales 2003). Finally, stock markets
provide a forum where multiple opinions, both expert and non-expert, on firms and their decisions clash with each other, while in bank lending such evaluations are made by few experts within one organisation. As such, it is argued, stock markets improve the allocation of capital and at the very least complement banks.

Another important way in which stock markets may outperform or at least complement banks concerns innovation. It is claimed that banks have an inherent bias towards prudence, low-risk investments and borrowers that offer tangible collateral to secure their loans (Morck and Nakamura 1999). Young and innovative firms, with potentially highly profitable but very risky projects, are therefore likely to struggle to obtain bank financing. Stock market investors would be more willing to fund such firms, since shares allow the provider of funds to participate in the success of the firm without an upper limit on their return (Wójcik 2008b). Thus, bank-centred financial systems may be more conducive to the funding of mature, less risky firms, while more market-based systems, more strongly support the growth of newer, riskier sectors (Levine 2004). Strong stock markets may therefore enhance the innovativeness and competitiveness of an economy. Consider that the relatively high growth of the US economy in the 1990s and early 2000s, has often been associated with large and liquid stock markets, fed with hundreds of IPOs of high-technology companies. European and other countries have tried to replicate this model (Posner 2005).

In contrast to orthodox economics, behavioural economics stresses the role of irrational behaviour in stock markets. Prices can rise or fall, even for years, without any changes in underlying fundamentals (e.g. in terms of corporate profitability) that would justify such price movements (Akerlof and Shiller 2009). In other words, bubbles and crashes are common in stock market history, and their effects on the distribution of wealth can be tremendous. Those who bought shares towards the end of a bubble, presumably the most vulnerable, lower-income investors, lose most (Shiller 2005). If considerable over- and underpricing are common on stock markets, and bursting bubbles lead to perverse distributional outcomes, this seriously undermines claims about the efficiency of stock markets as a mechanism allocating capital to firms, and a mechanism providing reliable investment returns on savings, including savings for retirement (Engelen 2003).

In addition to irrationality, stock markets may be subject to manipulation, with the main suspects including investment banks and corporate managers. Investment banks and investment banking departments of universal banks advise firms on their stock market entry (IPOs) and other capital market activities, such as mergers and acquisitions, which gives them access to corporate information, before other investors have it. On the other side of their business, their investment advisors and analysts influence investors’ opinions and decisions. This gives investment banks and bankers a position of power in stock markets, which contributes to their very high profitability and legendary pay packages, and which they may abuse, e.g. by using
inside information when trading on their own account (Bodnaruk et al. 2007; Crotty 2008).

Developed stock markets imply the preponderance of corporations with a multitude of small owners, none of which on their own can counterbalance the power of corporate managers. Since 1990s, in order to align the interests of managers with those of shareholders, it has been popular to award managers with stock options, which promise them big payouts if the stock price of the company goes up. Arguably, however, this may fixate managers’ interest on short-term stock market performance, and even enhance incentives to manipulate accounting figures (Bebchuk and Fried 2004; Froud et al. 2006). Corporate scandals at Enron, WorldCom or Ahold, where managers, investment bankers, and other intermediaries colluded with each other, exemplify in an extreme fashion that stock market relations are not as impersonal as orthodox economists paint them (Clark et al. 2006). Even if we assume that stock markets genuinely discipline corporate managers to maximise the value of shares, the ‘shareholder value’ orientation is in itself problematic, as it can undermine the interests of other corporate stakeholders, such as labour and local communities (Lazonick and O’Sullivan 2000; Wójcik forthcoming). Takeovers, facilitated by stock markets, can further erode the power of labour and local communities, as they result in abrupt closures and layoffs that may be socially harmful, while benefitting nobody but corporate raiders (Shleifer and Summers 1988). Indeed, financial economics has no conclusive evidence that hostile takeovers improve the performance of target firms (Becht et al. 2003). Thus, as the literature on financialisation stresses, stock markets may be seen as turning firms into commodities, things made for sale on the market, stripped of complex and locally embedded social relations that they represent (Aglietta and Reberioux 2005). On the investor side, growing exposure of households to stock market investments, either directly or via pension funds, may be seen as contributing to the rise of casino capitalism, where welfare provision is privatised, with individuals focusing on their own risky bets, and neglecting the need for social cooperation (Dore 2000; Hall and Soskice 2001).

What is the verdict of empirical research on the relative virtues and vices of stock markets? One recent review states that there is no conclusive evidence from cross-country studies that stock market-based or bank-based financial systems are better at fostering growth. At the same time, it notes a tendency that national financial systems become more stock market based as countries become richer (Levine 2004). To be sure the actual geography of stock markets must not be simplified to the distinction between rich and poor countries. Neither does it adhere to the stereotype of neo-liberal Anglo-Saxons versus the rest of the developed world. Table 1 is full of emerging markets, some of which, judging by the number of listed firms and the market capitalisation to GDP ratio, have larger stock markets than developed economies. Japan and Switzerland have a higher ratio of stock
market capitalisation to GDP than the USA or the UK. The mosaic of stock market influence goes deep – within Scandinavia stock market plays a small role in Denmark, but equity culture is well embedded in Sweden (Guiso et al. 2003). Moreover, research on Germany shows that the role and structure of stock markets can differ even between regions of the same country (Clark and Wójcik 2007). History complicates the picture further. In 1913 Japan, Germany and France had arguably more developed stock markets than the USA (Rajan and Zingales 2003). One lesson from geography and history is that there is not one optimal structure for providing financial functions to the economy (Merton and Bodie 2004; Peck and Theodore 2007).

Conclusions

This paper has reviewed state-of-the-art research on the geographical nature of stock markets. It shows that stock market actors and institutions do not just have to be somewhere, but where they are in relation to other actors and institutions has an effect on their behaviour and performance. Hence, the geography of stock markets is crucial to the spatial distribution of financial services and centres. On another level, the evolution and structure of stock markets involves a complex interplay of politics, technology, economy and culture, and can never be explained with economic models alone. Finally, stock markets do not just reflect economy and society, they influence how economy and society work. It has been a partial review of relevant research, but hopefully, it has encouraged some readers to watch this promising field and perhaps engage in it.

What can the current financial crisis tell us about stock markets, their geography, and their role in economy and society? To start with, it definitely exposes bigger than ever interconnectedness of stock markets. Stock prices in the USA, where the crisis originated, actually fell less than in Europe, Asia or Australia. From a normative perspective, some will argue that the crisis underscores the virtues of stock markets in contrast to wholesale, non-regulated, opaque financial instruments, such as the mortgage backed securities or credit default swaps. In September and October 2008, while the financial system was melting down, media were following stock markets like neutral, benign barometers of the economy, which could tell us whether the public regained confidence in banking and help us predict the degree of coming recession. A more critical approach is in order. First, stock markets do not equal transparency. Consider, for example, the recent development of new alternative trading systems called ‘dark liquidity pools’, where institutions can trade anonymously, beyond the reach of stock exchange laws and regulations (Carrie 2008). Second, stock markets are central to both the causes and effects of the crisis. What about executives’ rewards linked to stock prices of their banks? Did not they exacerbate their short-term, risky and imprudent behaviour? What about retirement savings, channelled
to stock markets, which fuelled the stock market boom of the 1990s, but have now gone up in smoke?

Future research should go beyond questions raised by the current crisis. One item for the research agenda stems from the observation that listed firms, although plentiful, constitute only the tip of the corporate iceberg. There may be 2500 listed firms in the UK, but the total number of large firms (defined by turnover of over €50 m) exceeds 35,000 (Wójcik 2007a). The question then is how does the influence of stock markets and ‘shareholder value ideology’ on corporate governance trickle down to other, non-listed firms in different national and regional contexts. Another item is the impact of mergers and alliances between stock exchanges, such as NYSE-Euronext or Nasdaq-OMX, on the primary stock markets, and the geographical distribution of stock market services. Can these events prove decisive in forging a new hierarchy and network of financial centres? A final, and perhaps most difficult question, involves the impact of stock market-based financial system on income distribution and poverty.

Short Biography

Dariusz Wójcik’s research focuses on economic geography, corporate governance and finance; he has authored or co-authored papers in these areas for The Journal of Economic Geography, Economic Geography, Annals of the Association of American Geographers, Environment and Planning A, Regional Studies, and The International Encyclopedia of Human Geography. His book co-authored with Gordon L. Clark The Geography of Finance (Oxford 2007) documents the emerging global market for corporate governance and its impact on the future of European economies. His research has been reported in The Financial Times and The Financial News. Current research projects concern the future of global stock markets and financial centres, as well as financial regulation and innovation. He is a Lecturer at the School of Geography and the Environment, and Fellow of St. Peter’s College Oxford. Prior to this appointment he has lectured at the University College London, and the London School of Economics and Political Science. He holds an MSc in Geography from Jagiellonian University, and MSc in Economics from the Cracow Academy of Economics, an MSc in Banking and Finance from Stockholm University, and a PhD from Oxford University.

Note

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