

Development Informatics

Working Paper Series

The Development Informatics working paper series discusses the broad issues surrounding information, knowledge, information systems, and information and communication technologies in the process of socio-economic development

Paper No. 33

Nation States, Networks of Flows and ICT-Enabled Development: *Learning from Jordan*

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2008

ISBN: 978-1-905469-00-0

Published *Development Informatics Group*
by: **Institute for Development Policy and Management**
University of Manchester, Arthur Lewis Building, Manchester, M13 9PL, UK
Tel: +44-161-275-2800/2804 Email: idpm@manchester.ac.uk
Web: <http://www.sed.manchester.ac.uk/idpm/dig>

View/Download from:

<http://www.sed.manchester.ac.uk/idpm/research/publications/wp/di/index.htm>

Educators' Guide from:

<http://www.sed.manchester.ac.uk/idpm/research/publications/wp/di/educdi.htm>

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2008

Abstract

This paper argues that information and communication technology (ICT)-enabled development needs to be conceptualised within a dialectic process of globalisation where, on the one hand, the flows of capital, commodities and information are expanding and accelerating while, on the other, nation states are essential components in providing the infrastructures for production, regulation and consumption of these flows. For countries with developmental strategies, this has led to the emergence of developmental network states where a networked polity of private/public agencies are central to *glocal* processes linking the global movement of capital, commodities and information with local circuits of capital, labour and infrastructure.

Institutions of a developmental network state have to negotiate a series of dilemmas centred on over-autonomy vs. over-embeddedness on the one hand and the capability to sustain and develop through time and space. These concepts enable an analysis of the role of states engaged in ICT-enabled developments and require a network-based approach based on multi-scalar analysis.

Jordan and REACH, its programme of ICT-enabled change, are analysed. Jordan is shown to be a recent developmental network state with REACH being paradoxically over-embedded and over-autonomous – indicative of the difficulties for a post-colonial country in creating a network polity. The mediation of *glocal* processes in REACH shows how important a variety of non-market mechanisms are to the working of ICT-enabled development and their absence can help explain early problems with REACH failing to achieve its targets for ICT foreign direct investment.

Introduction

Major policy initiatives such as the World Summit on the Information Society (WSIS 2005), and an emerging academic literature (see Carmel & Tjia 2005; Heeks & Nicholson 2004) argue or presume that the nation state should play an important role in ICT-enabled development. Yet, a debate remains ongoing on what agency a nation state has and how it may be exercised in a globalising world (Brenner 1999; Gallagher 2005; Ó'Riain 2004; Walsham 2001; Weiss 1998). ICTs throw this debate into sharp relief: frequently they are argued to be one of the key forces in a space of flows of information, technology, images, and capital, said to dominate the space of places where people live and work bounded by physical proximity (Castells 1996: 412).

So what can nation states do to assist ICT-enabled development in a world where the example of ICTs themselves appears to privilege flows and the global rather than what is in the control of individual states? To address this issue, this paper makes three main points:

- First, it argues that the role of the state is being rescaled and its agency changing within a dialectic of globalisation in which nation states are a key component.
- Second, the paper focuses on a series of dilemmas facing a nation state engaged in ICT-enabled developments that require the creation of networks of agencies whilst seeking to embed ICT developments in local businesses and communities.
- Finally, it argues that this analysis, though at times problematic, critiques notions that ICT-enabled development is a distance-less activity in a world of flows where any state potentially can transform their economy through ICT foreign direct investment.

The paper uses the example of Jordan and a project, REACH, begun in 1999 and initially focused on building an ICT industry, to develop these arguments.

Jordan is interesting for several reasons. As a small country many of the processes in ICT-enabled development are easier to delineate and ICT-enabled development has been a central tenet of government policy since 1999. The King, King Abdullah II, is generally credited as a key instigator and catalyst for ICT-enabled development in Jordan. His role is a very visible aspect of 'political will' regarded as a key ingredient in successful ICT-enabled development (Walsham 2005). Jordan is seen by the International Monetary Fund (IMF) and the World Bank as an exemplar of a developing country and provides insights into ICT-enabled development under these conditions (Jordan Times 2005). In short, Jordan is a special case for investigation, small with few resources, where ICT-enabled development is a central tenet of government policy, and a successful developing country (by IMF and World Bank standards).

A. The Nation State, ICTs, and Development

The last few years have witnessed an increasing interest in the issues and problems of the developing world and how ICTs are implicated in these matters (Avgerou 2002; Castells 1997; 2000; Walsham 2001). For Castells, ICT '... is the essential tool for economic development and material well-being in our age; it conditions power, knowledge and creativity; it is, for the time being, unevenly distributed within countries and between countries; and it requires, for the full realization of its developmental value, an inter-related system of flexible organizations and information-oriented institutions' (Castells 1999: 12).

Information technologies, it is said, underpin a new form of society, a network society formed around flows of information, flows of capital, flows of technology, and flows of images: what Castells calls a space of flows which is the material organisation of time-sharing social practices that work through flows (Castells 1996: 412). This space of flows is argued to dominate the space of places of people's cultures and where people live and work bounded by physical proximity. The interconnection of flows forms a network society where inclusion in the network is of more importance than physical proximity and a culture of virtuality is constructed that transcends time and space (Castells 2000: 381).

Information technologies are a key ingredient in the emergence of informational capitalism, a new formulation of capitalism that is more flexible and relies on innovation to enhance productivity and on globalised competitiveness to develop wealth (Castells 2000: 369). Those who are not connected in these networks are left to social exclusion and economic irrelevance and constitute what Castells calls a 'fourth world'. Thus, we have a contrast between the creation of networks of those people and spaces that are valuable and connected and the formation of places and people that are socially excluded; both to be found in the jurisdiction of nation states.

A1. Globalisation and the Nation State

But how can we analyse the role of the nation state in a world where most claim that the global scale has become increasingly important (see Brenner 1999)? One approach is to consider global space in state-centric terms where globalisation is not only the growing interconnectedness of different parts of the globe, but entails the construction of 'a single society and culture occupying the planet' (Waters 1995 quoted in Brenner 1999: 54).¹ Here the differences between a world scale and a national scale are taken to be one of size where the concepts of national economy, society and culture are enlarged to similar concepts on a world scale. The world is seen as being filled by socio-cultural practices associated with processes of globalisation rather than being produced or transformed by these processes: processes where the state's role, as an agent and site of globalisation processes, is masked (ibid).

An opposite view sees a historical process at work where new networks and flows are said to be supplanting the geography of state territories and state-centric approaches.

¹ For example Brenner categorizes the work of Robertson (1992) and Wallerstein (1989) as state-centric approaches to globalisation.

As exemplified by Castells above, much of this research represents the spaces of globalisation as flows; mediated by new ICTs, the internationalisation of capital and financial markets; the increased role of electronic media (to name but three) which stands in opposition to territorial spaces based on boundedness and geographical fixity (Brenner 1999: 60).² As Brenner puts it the image here is of global space as 'placeless, distance-less, and borderless'. A consequence of this view is to assert that globalisation sees the decline and erosion of the nation state.

Rather than seeing an either/or opposition between state-centric approaches or one of deterritorialisation or flows, Brenner identifies a dialectic process taking place. On the one hand, there are drives deriving from capitalism towards a continuing expansion and acceleration of the movement of commodities, capital, information, and images through geographical space³ and, on the other hand, relatively fixed and immobile socio-territorial infrastructures are produced, reconfigured and transformed to enable such movement (Brenner 1999: 43). The role of states is as *essential* components in these processes, providing infrastructures for production, regulation, and consumption necessary for the flows of information, commodities and capital. In short, the processes of globalisation over the last hundred years can be argued to have *consolidated* the state's role as the territorial scaffolding for the acceleration and expansion of capitalist flows (ibid: 45). Some states began to intervene in these processes and *plan* their development; these states have been called developmental states (Johnson 1982).

A2. The Developmental Network State

Though we should not be misled into accepting that states are found as generic types, some analysis of developmental states is useful. The archetype of the developmental state was Japan prior to the 1990s where the state and private sector were closely interconnected and in which ministries such as the Ministry of International Trade and Industry (MITI) controlled flows of capital and industrial policy. Informal networks within the state bureaucracy and between state ministries and private companies were also very important (Evans 1995: 49). The spectacular growth of Japan for some forty years gave credence to the importance of a developmental state. However, the role of the developmental state has become increasingly circumscribed. As Ó'Riain (2004: 27) has put it '*the global is no longer a context for developmental strategies but rather a constitutive element of them.*' Thus, a new type of developmental state, the developmental network state, can be said to have arisen in the last ten years as a consequence of the dialectic of globalisation discussed above (ibid).

Central to the notion of a developmental network state is what can be termed the rescaling of the state (Swyngedouw 1997). Rescaling identifies a certain 'hollowing out' (cf. Holliday 2000) of states where, on the one hand, the influence of global and transnational bodies such as the World Bank, the IMF, the World Trade Organisation (WTO), and trading blocs such as the European Union (EU), have become increasingly important while, on the other hand, many state activities move to

² Brenner places the work of Castells, Appadurai and Ohmae amongst others in this category (see Castells 1997; Appadurai 1996; Ohmae 1995)

³ Towards space/time compression in Harvey's (1989) terms.

regional bodies or to private—public partnerships. One contradictory outcome is that the state is required to act at all these levels while its scope for action is increasingly circumscribed.

Another effect is the emergence of a networked polity in which state agencies and other non-state organisations engage cooperatively in a setting of multiple and overlapping jurisdictions (Ansell 2000). The relations between these bodies are more than contract based and rely on other social involvement and hence, such an arrangement is more than just a market. Organisational structures are seen as organic rather than mechanistic, leading to initiative and knowledge being decentralised and widely distributed (Ansell 2000: 311). As Ansell puts it '[this] *logic of governance emphasizes the bringing together of unique configurations of actors around specific projects ... [and] [t]hese project teams will crisscross organisational turf and the boundary between public and private.*' (ibid). These projects are often centred on attracting global capital by creating connections with global agencies and transnational corporations and, at the same time, creating and maintaining local networks linked with these global networks. Such strategies complement *glocal* moves of global and local capital seeking to obtain competitive advantage in global production networks through the exploitation of national and local conditions of production (Swyngedouw 1997).

A3. Institutions and Dilemmas of the Developmental Network State

An important feature of a developmental network state is the types of institutions that are either created or in existence to mediate interactions between global and local circuits of capital, expertise, labour and commodities. Evans (1995), in a study of the development of information technology (IT) industries in three developing countries, argues that successful developmental states require *embedded autonomy* where state agencies are closely connected through dense social ties to local businesses while the state also has a corporate coherence, built around accountable bureaucracies, created by meritocratic recruitment and reward strategies within the agencies themselves. State autonomy allows national development goals to be followed while embeddedness enables information and ideas to flow between the state and society.

The political process can be said to be *over-embedded* when we find certain client groups being favoured, corruption, and pervasive patronage. In these cases, success and failure depends on being effective in politics as much as it does on effective production. *Over-autonomy* can lead to a directed programme that is overly reliant on external sources of authority and expertise and which is generally confined to the public sector. State development becomes dependent on following the prescriptions of external agencies that have limited linkages with local society (Ó'Riain 2004: 31). Two further dilemmas centre on how initiatives can be sustained over long time scales and second, how the effects and benefits of initiatives can be distributed across the territory of the nation state (ibid).

Evans identifies four possible roles for the state⁴; the main role of a developmental network state is one of husbandry where companies are actively cajoled and assisted into following certain strategies. However, it is important to recognise that states are not unitary or monolithic, but that different agencies of the state will have been formed at different periods, have different histories and perspectives, where dispute and disagreement are common: features that may be accentuated by the rescaling of the state.

Developmental states need to foster and maintain a sense of unity based around the creation and maintenance of shared identities while, in the same breath, act as enterprise associations and promote capitalist development which Cerny sees as critical when states seek to act as competition states⁵ in relation to global competitive forces (Cerny 1997). Immediately problems arise as to how to co-ordinate a networked polity but, more fundamentally, how to maintain a coherence in the nation state as inequalities between different sectors of society develop or are accentuated with some parts of society sharing and being reconfigured by flows of external capital, commodities and expertise, while other parts are not and stay as part of Castell's 'fourth world'. For many developmental states, especially those whose boundaries are creations of colonialism, there is a danger that the stresses of the entrepreneurial activities of the state and rising inequality will lead to serious tension and fragmentation of senses of shared nationality.

Small underdeveloped states face particular issues as they engage in development. Dependency theories argue that for these peripheral economies, foreign direct investment (FDI) may help in the short term, but will flounder in the long term due to a low level of linkages between multinational companies and indigenous industries and the repatriation of capital by foreign-owned firms (see Frank 1969). Nonetheless, a number of countries are seen as exemplars of development through FDI particularly in ICTs notably, Ireland, Israel and Singapore. The recognition of ICTs as a factor *for* development has also provided the state with new roles. First, states, looking at these exemplars, seek to develop strategies to encourage FDI in high-tech areas within their countries (Al Jaghoub & Westrup 2003; Nicholson & Sahay 2003). Second, a growing international awareness of ICTs as a mode of development has stimulated a number of initiatives aimed at using ICTs to enhance educational possibilities and to reduce poverty (DOI 2001; World Bank 2003). These initiatives can act as moves which reshape the competency of the state and often seek to 'modernise' the capabilities of the state and its people (see Mitchell 2002).

To summarise (see Table 1) developmental network states need to be able to attract global flows of capital, expertise and commodities and mediate to create and transform linkages with local businesses and communities, while recognising that global capital needs local infrastructures of production, labour and consumption which nation states can provide. In doing so, a balance between embeddedness and

⁴ These roles are as a custodian or regulator of IT development; as a demiurge or producer of these products and services; as midwifery in trying to assist local industry perhaps behind tariff barriers; and finally, as husbandry, where companies are actively cajoled and assisted into following certain strategies.

⁵ Cerny (1997) describes these processes as the emergence of a competition state which seeks to bring together different agencies in cooperation, especially adjusting to global actors, to enhance the competitiveness of the nation state.

autonomy needs continual maintenance. The networked polity that emerges has a territorial presence and raises a further difficulty as to how the infrastructures of capital, services and labour are distributed in the nation state. The dialectic of globalisation brings with it constant sources of instability as technological, organisational, economic and political movements realign the glocalisation processes which link the global and local, for capitalist companies and nation states. Institutional networks are processes of frequent adjustment and change where sources of competitive advantage are limited, subject to multiple other effects beyond the influence of the nation state and where recipes of action cannot be simply read off and implemented. In short, difficult though it seems to attract external flows of resources, the creation and maintenance of institutional arrangements to mediate these glocal arrangements appears as challenging.

Table 1: Summarising Key Points of the Theorisation of the Nation State and ICT-Enabled Development

<i>Globalisation</i>	Globalisation is a dialectical between continuing acceleration and expansion of the flows of information, commodities, capital and images and relatively fixed geographical infrastructures – nation states – that are produced and reconfigured to enable this movement. <i>Glocalisation</i> refers to these processes.
<i>The Nation State</i>	The nation state is an essential component of globalisation. States are being <i>rescaled</i> as global bodies (such as the WTO) become more important and as state activities move to regional or public—private agencies. <i>Network polities</i> are emerging that encompass the global and local, private and public agencies being linked together around specific projects. Developing nation states in this situation can be termed <i>developmental network states</i> .
<i>ICT-Enabled Developments</i>	Are usually examples of globalisation processes in which the activities of multilateral and bilateral agencies are significant. Are not simply market-driven. Non-market-based relations and institutions are very important in a network polity.
<i>Dilemmas of ICT-Enabled Development in Developmental Network States</i>	Institutions can be <i>over-embedded</i> where local situations of patronage take precedence or <i>over-autonomous</i> when development relies on external authority, funding and expertise. Both situations lead to a democratic deficit, and a lack of accountability. It is difficult to establish ICT-enabled development that is spatially distributed and that can be sustained over time.

A4. The Information Systems Literature and the Role of the Nation State

When we turn to information systems (IS) academic publications, there is an emerging literature investigating the determinants of IT industry success in small or developing countries which predicate a role for the state, but there is a serious knowledge gap on the role of the nation state in these developments. An exception is Ó'Riain (2004) whose excellent monograph mainly is confined to Ireland. Much of the literature can be characterised as either seeking to identify factors through quantitative analysis that can be correlated with a successful IT industry (Ein-Dor *et al.* 2004; 1997; Watson & Myers 2001) or engaged in creating or using models of software industry success factors to analyse specific countries' performance or future potential (Carmel 2003a, 2003b, 2003c; Carmel & Tjia 2005; Heeks 1999; Heeks & Nicholson 2002; 2004). These models exemplify a gap in knowledge as they tend to assume national governments are key actors of policy without engaging in *how* these governments can act, what are the constraints and possibilities available to them, and how their role can be theorised. Where the literature engages more fully in these issues such as in discussions about liberalisation of trade and ICT growth, a small literature exists which does not focus on the possibilities and constraints for government action in a globalising world (see Dedrick *et al* 2001; Kraemer and Dedrick 2001).

Though the IS academic literature and the policy literature (for example, WSIS 2003: 3) place an emphasis on government action, this needs further investigation. As has been discussed above, the processes of globalisation are historically and spatially constituted and nation states are key components in this dialectic. Thus, studies are needed that move both spatially, beyond countries where much of this theorisation has been developed – developed countries and a select number of developmental states – and, temporally, to investigate over time how governments have engaged in ICT-related development. These studies need to investigate activities within the state, the rescaling of the state and the creation of network polities. Thus, the rather less well-researched roles of external agencies such as the WTO, IMF, World Bank, donor agencies, and transnational companies, need to be considered as crucial aspects of a networked polity and processes of glocalisation.

Second, the role of state institutions needs further examination, both in the creation and maintenance of networked polities and in terms of the dilemmas of a developmental network state's institution building. These dilemmas can also be expressed as concern over a potential democratic deficit as states act strategically in relation to external agencies and, equally, it can be discussed as an emergence of a 'digital divide' between those closely interconnected with ICT-related networks and those who are not. Clearly, this is a major research agenda and this paper seeks to use one example, Jordan, and one aspect of ICT-enabled change, the development of an ICT industry, to analyse these themes as a first step to further studies that investigate more fully the political, economic and social issues of states engaging in ICT-enabled development.

B. Research Approach

Any study that invokes the rescaling of the state and the creation of network polities requires multiple scales of analysis which do not simply privilege one aspect of analysis (see Dicken et al 2001). The aspiration should be to provide a nuanced account of glocal processes where the context is taken as being constitutive. A network approach is helpful in developing such an analysis. The best known example is actor network theory, though there remains continuing discussion on key concepts (Latour 1987; 1999; Law & Hassard 1999; see Walsham & Sahay 1999). A key feature of any network approach is a focus on connection and the expectation that different scales of activity enfold so, for example, aspects of the global, embodied as US experts, are found in the local, such as REACH workshops, and vice versa.

The processes of globalisation and a network approach raise important issues for research practice. Drawing on Dicken et al (2001), four issues need engagement:

- First, it must be recognised that the analytic categories used carry discursive power. The notion of the double hermeneutic (Giddens 1990) posits that people are constantly re-using the conceptual arguments and categories that have developed in research. Thus, theories of globalisation become used by states and global agencies which naturalise contested theory and emphasise technique over critical analysis. Following how these processes are assembled and developed is a contribution to critical engagement that can arise from network analysis.
- Second, there is a danger of a bifurcated approach to glocalisation processes which privilege and construct either the global or the local whereas following networks moves through multiple levels of analysis and seeks to show relational effects: the global comes about in relation to constructing the local and vice versa.
- Third, when researching multiple scales, it is important not to be restricted to one or two units of analysis: for example, the private or public sectors. A heterogeneous network is constituted by looking at how intermediaries of information, capital, people or commodities flow and, as a consequence, how multiple agencies are involved, from international aid agencies, international regulatory agencies, individual governments, government departments, private sector associations, and so on.
- Fourth, it is important to question the generalisability of theories developed based on specific places and times. Arguably, the processes of globalisation are historically conditioned. Equally, nation states and peoples in specific regions are conditioned and changing. Therefore, care has to be exercised in seeking to extrapolate generalisable theories from historically- and locally-contingent settings.

This research derives from a longitudinal case study (between 2001-2005) of the REACH initiative in Jordan (see Table 2) which was the focal object of research. A key component was interviews with various people in different agencies: departments in government, private business associations, donor agencies, businesses, and education. People were chosen from the recommendations of others or through their position in specific agencies. Important sources included informal conversations with people, attending public workshops and meetings on the initiative; and using a variety of published and unpublished, academic and non academic, sources to establish a wider temporal and spatial range.

Table 2: History of REACH Programme and Other Relevant Events

Date	REACH	Other Events
1999, February		King Abdullah ascends throne
1999, Spring	King Abdullah asks private sector to investigate developing ICT sector	NASDAQ ⁶ index around 2500
1999, June	Concept paper on developing ICT sector presented to King Abdullah	
1999, October	REACH Initiative officially presented to King Abdullah	
1999, December		Jordan joins WTO
2000, March	Jordan First IT Forum; REACH 1.0 report published	NASDAQ index peaks at 5048 – Peak of 'dot com' boom
2000, May	Int@j officially registered and launched	
2000, July	REACH2.0 launched by Int@j	
2000, September	REACH2.0 completed, recommendations are presented to King. Jordan government signs agreement with Microsoft.	
2000, October	FDA agreement signed between Jordan and US	Beginning of second intifada in West Bank
2000, December	REACH advisory council convenes first meeting	NASDAQ index at 2352
2001, January	REACH 2.0 report published	
2001, September	Law amended to protect Intellectual Property Rights (IPR)	9/11 terrorist attack
2002, April	MoICT starts operating officially	
2002, May	Connecting Jordanians initiative begins	
2002, June	REACH3.0 process launched	
2002, October	REACH3.0 published at second Jordan ICT Forum	NASDAQ reaches low of 1114
2003, March		Iraq invaded
2003, June		Jordanian elections
2003, October	REACH4.0 launched	
2004, January	REACH4.0 published	NASDAQ around 2000

(Sources: various)

Preliminary fieldwork took place in winter 2001 during which documentation on the initiative and related ICT initiatives in Jordan was collected. Intense fieldwork occurred between April-August 2002 during which interviews were conducted in a number of public and private organisations and with a number of government officials involved in the ICT initiatives in Jordan. The process of preparing REACH 3.0 was followed up during the field visit of 2002 where participant observation took place during REACH 3.0 workshops. The workshops were all tape-recorded. In addition, events that were taking place as a result of the initiative and other issues that were related directly and indirectly were also followed up. Participant observation took place during the third Jordan ICT Forum in September 2004. A further field visit took place in January 2005. A number of people who were interviewed in 2005 were either the same people interviewed in 2002 or those who held the same position, in addition to new interviews and informal 'chats' with a number of people. One aim

⁶ The NASDAQ index – the US technology stocks index – gives a proxy for international confidence in ICT companies and the market for ICT products. For a country wishing to engage in ICT exports, the state of the international market is important.

was to discuss the REACH initiative with either the same people where possible or with people who occupied similar positions to try to gain an understanding of how their perceptions of REACH had changed. In all 37 people were formally interviewed, of whom six people (or people occupying the same post) were interviewed twice and one person was interviewed four times.

Using a network approach, the issue of data analysis becomes a 'provisionally rational project' (Alvesson & Skoldberg 2000: 287) as it is impossible to identify data devoid of interpretation. Instead we have reworked our interpretations applying and then rejecting various theorisations as unsatisfactory. Following Silverman (1997 quoted in Alvesson & Skoldberg 2000: 276) we have tried to develop an analysis to satisfy two criteria: that we demonstrate why we should be believed and second, that the research problem has theoretical and, in this case, practical significance.

The next two sections begin by discussing Jordan as an example of a rescaling nation state and then describing the REACH project as an emerging network polity. Section E takes this example to develop notions of rescaling the state and a networked polity.

C. Jordan, REACH, and the Rescaling of the State

Jordan is a small, middle-income, country in the Middle East with a population of just over five million. It is relatively landlocked and shares borders with the West Bank, Israel, Syria, Iraq and Saudi Arabia. The origins of the state of Jordan arise from the end of the First World War when the League of Nations gave Britain a mandate over an area known as Transjordan created out of provinces of the previous Ottoman Empire. The Hashemite Emir (later King) Abdullah I became head of state in 1921 and engaged in nation building. As an official website (King Hussain I 2005) puts it he '*established the first centralized governmental system out of a mostly tribal and nomadic society.*'

Jordan achieved independence in 1946 and has faced various political problems and challenges including a lack of natural resources and a weak economy. It is often described as a *semi-rentier* state, depending extensively on external income flows such as foreign aid and the remittances of Jordanians working abroad which weaken accountability and allow the state to function without extracting substantial revenue from domestic sources (Wiktorowicz 2002; Yom 2005). The Jordanian economy continues to have a high rate of unemployment, a chronic trade deficit, in addition to poverty, debt, and a high rate of population growth (e.g. IMF 2007).

Despite theorisation that the rescaling of the state is a relatively recent phenomenon, it is clear that Jordan has had multiple interventions and involvements over its short history prior to the late 1980s. By then the economy was fairly stagnant with the government having no trade policy despite a relatively liberal trading environment (Wilson 1988: 340). Due to an increasing debt burden, Jordan was forced to call in the IMF and a structural adjustment programme was negotiated in 1988 (Piro 1998). Consequently, Jordan started implementing policies of privatisation, trade liberalisation, and reducing public debt (financial austerity measures). Increasing prices as a result of these policies caused unrest in parts of the country with riots in 1989 and 1996.

By 1993, it was recognised that a combination of circumstances had nearly halved the income of the average Jordanian (IMF 2004: 11). The close involvement of the IMF changed the scale of the state as it sought '*... to comply with the norms of an increasingly globalized world order*' (Ryan 1999: 669). Privatisation and market reform was not only an economic policy but highly political (Piro 1998). A major issue in Jordan, consequent on its origins, is that the state has always been a key influence in the economic sphere with a smaller private sector and extensive overlap between individuals in both sectors (Ryan 2002).

However, in the long term, external agencies consider that these policies have had significant effects, and have '*... transformed Jordan from an inward-oriented, mostly state-controlled, and highly indebted to an export-oriented economy where the private sector is the primary engine of growth.*' (IMF 2004:8). Nonetheless problems continue: for example, Jordan has had to adjust to large influxes of refugees at several times in its history: Palestinians in 1967 and 1973; expatriate Jordanians from the Gulf area in 1991; and most recently, several hundred thousand Iraqis fleeing from the unstable situation in their country in 2004. Since 1988, it can be argued that the state has been consistently trying to mediate between external demands, local businesses, and a wider population often adversely affected by IMF-led policies.

The accession to the throne of King Abdullah II in 1999 is seen as highly significant by most commentators (Al-Ali 2005; Andoni 2000; Khouri 2003) and he is credited with quickening the pace of economic and legislative change. The King is argued to occupy an unusual position in Jordan. Though Jordan is a constitutional monarchy, the country has strong tribal identities and has a tribal value system (see Layne 1994; Khouri 2003) where the King has 'amazing powers' and still 'calls the shots' (Khouri 2003) though this situation is regarded as altering. Most of the initiatives for change in Jordan are seen to come from the top.

In 2000, after five years of negotiation, Jordan gained accession to the WTO. Membership of the WTO required a removal of tariffs and the introduction of a number of laws – one of which was the safeguarding of intellectual property rights (Jordan Country Monitor 2001). There was little debate on entry to the WTO in Jordan though it was recognised that some parts of the economy would be adversely affected.

In 2000, Jordan was the first Arab country to enter into a free trade agreement with the US and, in 2001, Jordan entered into a similar agreement with the European Union. By 2005 Jordan was regarded as an excellent example of how a country can develop using the assistance of the IMF. As the Jordanian Foreign Ministry put it, '[w]ith the help of the World Bank and IMF, Jordan has established itself as a model developing country.' (Foreign Ministry Jordan 2005), a comment echoed by an IMF delegation to Jordan (Jordan Times 2005). Nonetheless, reports by the World Bank and the WTO recognized room for improvement. Both noted that the role of government needed to be reduced. For example the IMF argues '*[t]he government should continue to reduce its role in the economy, including through further privatization, and encourage private sector development.*' (IMF 2004: 160). Export-led growth and increasing foreign direct investment have been seen as key ingredients in future development of the Jordanian economy (IMF 2004:11; King Abdullah II

2004a). In many places, it is possible to find similar sentiments to the IMF and the World Bank – the reduction of the public sector; further privatisation; increasing the role of the private sector – attributed to the insights of the King (see Al-Ali 2005).

Before moving on to discuss ICT-enabled development, it is clear that Jordan has made significant steps to rescale its activities by following IMF and World Bank policies, by joining the WTO and by entering into free trade agreements with the EU and US. Aspects of the Jordanian nation state have been changed to make it a location for foreign trade and investment: points that we will discuss later in relation to ICT-enabled development.

When King Abdullah II came to the throne he very quickly began to promote the idea that ICTs can be used in Jordan as a means of development (King Abdullah II 2000a) and, it is claimed, transform the Jordanian economy into a knowledge-based economy with ICTs as its driving force (Nusseir 2001). There is a consensus among people interviewed that Jordan's major asset is its human resources seen as key to a developing ICT industry.⁷ Jordan undertook or is undertaking a number of major initiatives to build an ICT industry expected to create thousands of jobs over time (King Abdullah II 2000b), and to use ICTs to provide widespread social and economic development. In the next section we will focus on the REACH initiative which began as Jordan's plan to build an export-oriented ICT industry.

There is a small academic literature on ICTs and Jordan with most of it focusing on e-government initiatives (Blakemore and Dutton 2003; Ciborra 2002; Ciborra & Navarra 2003; Ciborra & Navarra 2005; Kulchitsky 2004). In particular, Ciborra & Navarra (2005) develops themes of good governance and e-government in an interesting way. Earlier work (Al Jaghoub and Westrup 2003; Al Jaghoub 2004) analysed Jordan's strategy for developing an ICT industry drawing on Cerny's notion of a competition state to understand the changing role of the state. This work was necessarily preliminary as the REACH project was still in progress and a final evaluation could not be made. Conceptually however, such work needed further development. Four points can be made:

- First, the notion of the competition state was not very specific.
- Second, the conceptualisation assumed that all states will move to the model of a competition state.
- Third, it largely presumed that all institutions will act to further the notion of the competition state while downplaying tensions between institutions of the state.
- Finally, it did not consider the problems facing institutions in a competition state starting to operate on a market-based approach while seeking to build non-market associations.

⁷ There is a certain sense of *déjà vu* about these pronouncements. For example, in 1988, Wilson (1988: 236) pointed out that 'Jordan has the most highly educated and best trained workforce in the Arab World.' Though, at that time, most of these people emigrated and remitted money back to Jordan.

D. The REACH Initiative and a Network Polity

REACH began as Jordan's plan to build a vibrant export-oriented software industry (REACH 2000) (see also Table 2). The acronym represents the first letters of five of the initiative's six strategic thrusts, namely **R**egulatory framework, **E**nabling environment and **I**nfrastructure, **A**dvancement of National IT Programmes, **C**apital and Finance, **H**uman Resource Development, in addition to the sixth, which was Government Support (REACH 2.0 2001). The beginning of REACH is recognised as 30 June 1999 (REACH 2.0 2001) when King Abdullah asked representatives of the private sector to '*see what it takes first of all for the private sector to grow this industry...second how [does the private sector] see the role of government developing in order to create the environment that is required, and third how can we move Jordan from basically the survivor mode to a thrive mode.*' (Interview: Zu'bi 2002).

As a response to this request, representatives of the private sector in cooperation with the AMIR (Achievement of Market-Friendly Initiatives and Results) programme, funded by the United States Agency for International Development (USAID) were brought together and produced the first REACH report presented to the King in June 1999. Notably, the network of actors behind REACH, financed and largely organized by a US donor agency, had no official government agency involvement though it reported to the King as Head of State. This report recognized that Jordan could use its human capital to build an ICT industry, and that there were obstacles requiring a focused strategy. Private sector leadership and partnership with the government were seen as key components but, in neither sector, were there suitable agencies (REACH 2000). Although it was considered that the nucleus of an ICT industry existed in Jordan prior to REACH (Interview: Zu'bi 2002; REACH 2000) it was at a very early stage of development: fragmented, undercapitalised, and suffering from a brain drain. FDI was limited and government support was weak. Nonetheless, it was argued that highly-skilled professionals were available at low labour costs, in addition to good relations with offshore markets and a good reputation in regional markets. Therefore, the report found that Jordan could compete in international markets by setting a strategic plan consisting of a vision for Jordan's software and IT services sector, an overall goal for development, and an action plan to achieve this vision (REACH 2000: 39).

The objectives in the first report were threefold: economic, social and strategic. The economic goals were to create 30,000 IT related jobs, US\$550 million in exports and US\$150 million in FDI (see Tables 3 and 4). The social benefits were less tangible: an empowered population, improved public services, and better education. There were four strategic objectives namely: greater efficiency of government; the creation of a knowledge-based economy; enhanced economic competitiveness; and creating less dependence on traditional markets.

It was recognized that Jordan faced a unique opportunity where the '*timing, positioning, and actions of nations will determine those who will benefit from this Knowledge Revolution, and those who will be left behind.*' (REACH 2005). For Jordan, a focus on global software and services was argued as sensible for four reasons. The industry had low start-up capital requirements making market entry less risky for Jordanian companies. Second, Jordan had a favourable location in the regional market with bilingual Arabic/English capabilities and extensive relationships

in the region. Third, Jordan's relatively well-educated workforce was an important advantage. Finally, software services is a 'distance-less' activity and is not affected by transportation constraints (REACH 2000: 11). In other words, notions of globalisation as non-territorial were being replayed as policy opportunities.

Table 3: General Statistics on the Jordanian ICT Sector

	1999	2000	2001	2002	2003 ⁸	2004 Target
No. Employees (thousands)	n/a	2	n/a	n/a	4	30
No. of ICT Companies	n/a	n/a	285	334	373	n/a
Domestic Revenue (US\$ million)	45	136	130	188.4	226.2	n/a
Export Revenue (US\$ million)	11.2	40	27 ⁹	40	70	550
Total Revenue (US\$ million)	56 ¹⁰	177	157	228	296	n/a
Cumulative FDI (US\$ million)	n/a	n/a	60	68	80	150

(Sources: REACH 1.0 2000; REACH 2.0 2001; REACH 3.0 2002; REACH 4.0 2004; Int@j 2004)

Table 4: Jordanian ICT Sector Exports by Region

Region (US\$ million)	2001	2002	2003
Other Arab	12	3	28
Gulf	6	31	26
The Americas	5	3	13
Europe	2.8	2.4	2.3
Other	0.3	0.3	0.2
Total (US\$m)	27	40	70

(Sources: REACH 3.0 2002; REACH 4.0, 2004; Int@j 2004)

To achieve these ambitious objectives a detailed set of recommended actions for each strategic area mentioned above were proposed to create networks of cooperation between the domestic ICT industry, different agencies of government (mainly government ministries), universities and donor agencies. The report was clear to identify the respective roles for the private sector and government: '*[t]hroughout the world, IT initiatives have succeeded because they were led by the private sector, but had high-level support and positive actions of Government. This partnership is the keystone of the REACH initiative.*' (REACH 2000: 42). The timeframe for the REACH initiative was from 1999-2004. Annual reports followed the first one until REACH 4.0 in 2004.

⁸ Int@j survey conducted in August 2004.

⁹ Two figures for export revenues are given in REACH 3.0: a detailed breakdown of revenues totalling \$27 million (p. 62) and a general figure of \$38 million (p.13). We have taken the former figure.

¹⁰ Estimated figures for 1998.

Preparing the first REACH report involved bringing together different agencies and the beginnings of a networked polity though the government did not take part in this report (REACH 2000: 4). In retrospect it appears the main actors were consultants from the AMIR programme with some assistance from selected individuals of the small Jordanian ICT industry. The funding for REACH came largely from the US-financed AMIR programme and the mechanisms used to implement REACH share strong similarities with the views of the King, the IMF and the World Bank discussed earlier. Much of the argument expected that if the nation state transformed itself in terms of legislation, liberalisation, provision of educated (and cheap) personnel, flows of ICT FDI would seek to locate in Jordan. Again, these assumptions mirror arguments of a 'distance-less, placeless' non-territorial world where flows of capital and expertise can go anywhere.

Many changes took place after the first REACH report, some of which were directly related to its recommended actions, while others were changes in economic and political circumstances in Jordan. Jordan became a member of the WTO, seen as a major step towards attracting FDI to the country. Jordan developed privatisation and liberalisation policies, including a partial privatisation of Jordan Telecom, the state telecom agency, acquired by France Telecom. As noted above, Jordan also signed a free trade agreement with the United States in October 2000, which played a key role in increasing exports to the United States though these were mainly textiles not ICT products or services (Jordan Country Monitor 2003: Table 4). In short, all of these events seem to be aimed at drawing Jordan into a globalised economic system by changing the nation state to attract global flows of capital and expertise of which ICT investment and exports were seen as the predominant opportunity. However, at that time, the political situation in neighbouring states became more unstable.

As far as the ICT industry was concerned, specific developments took place as a result of REACH 1.0 and its recommendations. First, and most significantly, there was 'political will' as the prestige and authority of the King was firmly behind it. Quite quickly a local ICT industry body, the Information Technology Association of Jordan (Int@j), was formed in March 2000 (REACH 3.0 2002). Int@j, meaning 'production' in Arabic, is a 'voluntary, non-profit, private organisation representing, promoting and advancing the Jordanian software and IT services industry in the global market'. Int@j became a representative for the sector in Jordan and companies started becoming members in return for an annual fee, though it has been mainly financed by AMIR.

The Ministry of ICT (MoICT) was also established after REACH 1.0. The Ministry started operating officially under the new name in April 2002, though it began cooperating with the private sector, in particular Int@j, earlier on, as the Ministry and Int@j began working as counterparts. In addition, the REACH Advisory Council was formed as a public / private sector committee, chaired by the Minister of ICT, to guide the implementation of REACH objectives through government (REACH 2.0 2001). The formation of these institutions illustrates the creation of both actors and networks which are not market-based, to assist in creating market-based change. These networks brought together private companies, a new private association, private—public committees, a new government ministry and the AMIR donor agency and its US consultants created around the notion of ICT-enabled development.

The government responded to the recommendations of REACH in a number of ways. Establishing the MoICT was one response, another was the launch of an e-government programme, which not only aimed to introduce technology to government, but also to change the way government operated by re-engineering its processes (Interview: Anani 2002). The e-government programme was also largely funded by US donors, advised by US consultants, and implemented by overseas companies or alliances of companies (see Blakemore & Dutton 2003; Ciborra & Navarra 2003).

REACH proposed an ambitious legislative programme to transform the regulative environment of the state to one more conducive to international capital. In many cases laws were written by the private sector¹¹ and implemented by government (Interview: Bilbessi 2002) and sometimes very rapidly, for instance, to facilitate the investment by Microsoft in a local company (Interview: Saleh 2002).

A number of ICT-related activities started taking place after REACH 1.0, which also demonstrated that ICT had become a priority sector of the state in general and the King in particular. The first International Jordan IT Forum was held in 2000 under his patronage. In this forum, senior executives of the US ICT industry were present. The King also started promoting Jordan's ICT industry at the World Economic Forum in Davos, where he made contact with Bill Gates, which resulted in Microsoft starting some activities in Jordan. Quite quickly alliances between some local universities and transnational corporations such as Oracle and Microsoft took place providing support for teaching programmes or creating small-scale research laboratories (REACH 2.0 2001). At that time, it is clear that ICT-enabled development had become central for Jordanian development with the active participation of the King in seeking to attract international transnational corporations (mainly US), with incipient glocalisation of capital in educational resources and some small company startups (Meeting: El Saeed 2005). These events can be considered important for Jordan's ICT sector, which had been almost non-existent in the national priorities, and became, in a couple of years, a key sector for Jordan promoted by the King and highly visible to the public.

The second REACH report was published in January 2001 following a series of consultations and working parties involving a large number of individuals in the public and private sectors and thirteen international consultants (REACH 2001: 5). The report followed up a number of recommendations of REACH 1.0 and reported on progress. This report was not so comprehensive as before but it was very upbeat in its assessment referring to '*... Jordan's extraordinary progress in developing a vibrant, export oriented Software Development and Information Technology Services Industry.*' (REACH 2001: 2) though it did caution to make sure that '*... momentum does not stall.*' (ibid). The key remaining issues identified in this report were new legislation, bureaucratic reform though the implementation of e-government, quality certification of industry, management and technical training, and upgrading the telecoms infrastructure. All these issues involved re-organising the state and the emergence of a networked polity.

¹¹ We are unclear as to who in the private sector had the skills to draft legislation, but it is probable that international consultants were significantly involved (see Chemonics 2005)

In September 2002 the REACH 3.0 report was published and was less optimistic than earlier reports. It noted early on the 'severe market corrections' that had caused a recession in the IT industry and the instability in the region and the world that made it more difficult to attract investment into the region.¹² The focus of the initiative started changing. As REACH 3.0 (REACH 3.0 2002: 6) stated: '*[w]hile Jordan's vision and targets remain steady, the REACH strategy has adapted over time. More than just a sector growth strategy, REACH is now part of a truly national initiative for achieving e-readiness and beyond. The momentum that the launch of REACH first sparked has inspired a host of new initiatives designed to employ technology as a tool for bridging the digital divide and enhancing the lives of all Jordanians.*' Dr. Zu'bi, the minister of ICT and in charge of the newly created MoICT also identified this change: '*[REACH] has moved from looking at ICT as an enabler for an industry to ICT as an enabler for a nation to get into the knowledge economy*' (Interview: Zu'bi 2002).

REACH 3.0 followed the same strategic thrusts of the first two reports. However, a number of other ICT initiatives were incorporated, both in discussing issues and as part of the recommended actions. For example, the Connecting Jordanians Initiative, a major programme launched by the MoICT to provide IT infrastructure for all schools and colleges in Jordan, was included in the Human Resources dimension of REACH. Another example was the development of ICT centres (subsequently known as Knowledge Stations) in different communities to provide ICT resources and training for people not in full-time education.

The final report, REACH 4.0 was published in January 2004. It was prepared on a smaller scale with meetings taking place between the various agencies without holding public workshops and without the involvement of international consultants (Interview: Younis 2004). In this report it was realised that there were recommendations that were being repeated without actions being taken and areas in which significant improvements were made (Int@j 2003). REACH 4.0 focused on prioritising smaller scale actions needed in specific areas such as creating business incubators (Interview: Younis 2004). It reported the latest events, discussed the various recommended actions and published ICT statistics (REACH 4.0 2004) (see Table 3).

Tables 3 and 4 show how REACH was represented. Put baldly, of the targets set only 12% of the employment target and 13% of export revenues were met though 53% of cumulative FDI appeared to be in place by late 2003. Unexpectedly domestic ICT revenue grew substantially (by over 500%).¹³ By its original expectations, REACH has not succeeded, but no one has made such a pronouncement. Rather, views of what REACH is and of what ICT development entails have changed. As a representative of Int@j argued, '*REACH is not only about numbers but is about the process*' (Interview: Younis 2005). What can this mean?

¹² The Nasdaq index was reaching its lowest level after the record high in 2000, and war in Iraq was becoming increasingly likely (see Table 2).

¹³ Export revenue grew over that period by more than 600% from a low base, but not in line with REACH's heady expectations of 6000% growth.

The start of REACH could not have been more high profile in Jordan: with a new monarch wanting to make a fresh start, develop the economic prospects of Jordan, and harness the ascribed potential of ICTs to take advantage of the often-quoted educational assets of Jordan. This relationship was more complicated than usually portrayed as REACH was also very close to what the WTO and World Bank were proposing for Jordan and, of course, REACH was financially backed by USAID and led by US-based consultancy companies. By 2005, Jordan had a plethora of ICT-enabled development projects: MoICT listed 14 e-initiatives; several of them were quite substantial, as well as REACH (MoICT 2005). Most of these projects involved the creation of new agencies, the use of overseas companies or consortia to provide technical resources and expertise, overseas aid agencies, the involvement of Jordanian government departments, the Jordanian private sector and, often, parts of the Jordanian population. Briefly, to take one example, the Knowledge Stations initiative created 75 community ICT centres throughout Jordan. It was initially sponsored by the King Abdullah Development Fund, organised by the Ministry of Education with the Queen Zein Al Sharaf Institute, National IT Centre, MoICT, Ministry of Planning, UN Development Programme, AMIR-USAID, and Digital Opportunity Trust (a Canadian international non-governmental organisation) being involved.

An incipient networked polity of different agencies, national and external, public, private and private/public, was to be found: all apparently sharing a premise that aspects of ICT are key to Jordan's development. Conflict or more often non-cooperation between agencies was not uncommon. For the most part, despite the importance placed on education, universities did not become involved in projects (Interview: Fayomi 2002) nor did they attend the human resources workshop in REACH 3.0. Ironically existing ICT companies were excluded from much ICT work in different initiatives as the contract sizes were too large (Interview: Arafah 2002). Bibessi, head of Int@j was unrepentant. *'People are saying that you are inviting all the giants [international IT companies] in, they will swallow the local market. Tough luck! This is the free economy, this is competition. We did enter the WTO.'*

Perhaps the rescaling of the state at this time has been one of the more interesting aspects of the REACH programme. The agency of the King is frequently credited with cultivating links with a variety of international companies, heads of states, and multinational agencies (for example: meetings El Saeed 2005; Abu Zeid 2005). From 1999, building on the legacy of his father, King Hussain, the King was an important participant in the World Economic Forum (WEF) at Davos each year. He was instrumental in creating an annual World Economic Forum event in Jordan and, uniquely for the WEF, it is the sponsor of a national initiative, the Jordan Education Initiative whose aims include *'[e]ncourag[ing] the development of an efficient public-private model for the acceleration of educational reforms in developing countries ... through the effective use of information and communication technology.'* (WEF 2005). The King has also been able to mobilise support from the chairmen of large US multinationals such as John Chambers of Cisco (WEF 2003) and Bill Gates of Microsoft, mainly it appears through personal contacts. The King has been compared to the CEO of a company as Scott Shuster, the moderator at the ICT Forum in Jordan, commented, *'[t]he nation of Jordan has a CEO and we all know who he is.'*

This lauding of the King can be seen as symptomatic of cultivating a monarchy in a small state with unstable economic and social circumstances. Nonetheless, a

rescaling of Jordan seems to be assisted by someone who can encapsulate the Kingdom, command executive agency, and develop relationships with people occupying important positions in multinational companies and other countries. Though the King's political will is unchallenged (though see BBC 2004), it does not mean that edicts and policies are followed through. Indeed, Jordan has a number of initiatives and programmes which do not necessarily translate into expected developments as the example of REACH indicates (cf. Habayeb 2005). For those involved in managing aspects of these programmes, the focus is on the long term: '*I know it is expensive, I know it costs a lot. We are educating a generation. In 2010 we should notice the difference.*' (Meeting: Hourani 2005). Perhaps, by referring to REACH as a 'process', Younis is considering this programme as a means to draw in mainly donor FDI, leading to the creation of a networked polity around the notion of ICTs which should bear more tangible fruit sometime in the future.

The year 2004 was the final year of the five-year plan. A concluding report evaluating the whole initiative had not been issued at the time of writing. No further plans to extend the REACH programme have come to fruition (Interview: Abu Zeid 2005) and a policy statement for the ICT sector largely restricts itself to regulatory issues and the encouragement of the private sector (MoICT 2007).¹⁴

E. Jordan and the Dilemmas of a Developmental Network State

'The key question, in short, is not whether the state is globalizing or localizing, but rather what kind of struggles are being waged and by whom, and how the rescaling of the state toward the glocal produces and reflects shifts in relative sociospatial power geometries.' (Swyngedouw 1997 quoted in Brenner 2003: 317)

Jordan and the REACH initiative raise questions that draw on and develop the theorisation discussed above. Is REACH an example of an aspect of an incipient networked polity in a rescaling state enabling glocalising processes to develop centred on ICTs? Second, how have Jordanian institutions, constituted and engaging in ICT development, coped with dilemmas of institution building such as embedded autonomy? Finally, what does the example of Jordan and REACH reveal about issues of 'distance-less' and 'placeless' ICT-enabled development?

E1. A Rescaled State and a Networked Polity?

A key issue for the nation state within a dialectic of globalisation is the relations between the state and civil society. We have discussed this in terms of a rescaling of the state on the one hand and the emergence of a network polity on the other. Many of the characteristics of Jordan and its programme of ICT-enabled development fit this analysis as has been portrayed above. Jordan can be argued to be a developmental network state, though emergent, with a short history of engaging in developmental activities; a particular experience of state provision coupled with a

¹⁴ It is worth noting that USAID funding in this area has ceased.

weak private sector; and a small economic base. Legislative change and moves from public to private provision of services have occurred through the involvement of IMF programmes, and more recently, WTO membership. Similar changes are central to the REACH programme. The state is rescaling through the intervention and demands of agencies such as the IMF and the requirements of membership of bodies such as WTO. State capabilities are being rescaled with moves toward grouping of public—private or private provision in a range of services as was found in REACH.

However a thesis of a rescaling of the state assumes a prior situation with limited interaction between sovereign nation states – so called Westphalian states – which may have held true in Europe, but developing countries are usually products of a post-colonial world and Jordan is no exception. Critiques of a globalisation thesis frequently assert that, on most measures, the world was more globalised prior to 1914 than since (Hirst & Thompson 1999). Jordan's history shows that we cannot find any period when it can be described as a Westphalian nation state. It has had to cope with changes in boundaries, wars, internal unrest, and large movements of population and the maintenance of the state has been a constant issue. To take one example, Jordan has been highly dependent on external aid for much of its history (up to 18% of GNP in the 1960s) and it was a dramatic drop in aid in the 1980s that led to calling in the IMF and its subsequent structural adjustment programme. Jordan has frequently engaged with external agencies with consequent changes in the scale of the state in terms of having to negotiate and recast its agency. Here, Jordan's experience may be in common with other post-colonial countries and rescaling of the state has been an *on-going* issue, not just a recent response to a dialectic of globalisation.

A network polity arising from rescaling the state is assumed to entail a reduction of state provision and influence as heterogeneous networks of public—private and external agencies increase in importance (Ansell 2000). It has been noted that aspects of ICT-enabled development, such as the e-government programme, are paradoxically leading to increased state provision in Jordan (Ciborra & Navarra 2005). What is difficult to disentangle is how much ICT-enabled development is a process leading to a networked polity and the development of civil society and how much ICT-enabled development is being used to attempt to reach this end.

In Jordan, identifying respective roles of state and civil society has been complicated as the state has been dominant in economic and social affairs. Many states in the Middle East can be described as *rentier* or *semi-rentier* states: dependent on revenues from commodity products (mainly oil, though phosphates in Jordan's case), external aid and remittances from expatriates (Yom 2005). Jordan's reliance on these sources of income has declined and it is, as described earlier, a *semi-rentier* state. The state depends on, often, external sources of revenue and redistributes them through society. REACH can be seen as another phase in Jordan's longstanding aid relationships, particularly with the US. What is different with REACH and other Jordanian aid programmes (see AMIR 2005a) is that they explicitly seek to develop institutions of private enterprise and of civil society.

This *rentier* argument is a structural thesis leaving little room for explanation of how states behave differently faced with similar economic circumstances and it is important to be aware of different historical relationships within specific countries (see Moore 2004). The agency of the state, particularly the King, is seen as central to

change in Jordan to date but the creation of a networked polity and civil society institutions, in part centred on ICT-enabled development, should lead to a diminution of the dominance of the state. One way to explore this issue, and become clearer on limitations of the notion of a networked polity in Jordan, is to look at the dilemmas of institution building in developmental network states.

E2. Dilemmas of Institution Building

Following Evans (1995), Jordan has used a husbandry approach to the ICT sector trying to stimulate companies to follow certain strategies. Developing network states face four related dilemmas in building institutions: how to avoid institutions becoming over-embedded on the one hand or over-autonomous on the other; and how to maintain relationships through time and throughout the territory of the state.

Wasta, using your position to favour other people through appointments or other means, is widespread in Jordan, and more generally in the region, and especially common in the public services (McDermott 2005).¹⁵ Many measures to reduce *wasta* have been introduced with King Abdullah being seen as particularly active in this area (Al Ali 2005; McDermott 2005), but the use of connections though *wasta* reinforces tribal links and indicates a distrust of institutions and their recruitment patterns (Henderson 2000). MoICT is seen as a symbol of reform as all its appointments are made through competition (Meeting: Hourani 2005) and expectations are placed on e-government that it will reduce *wasta* (see Sawalha 2002). These networks of *wasta* point to issues of over-embeddedness where position rather than performance is most important. REACH manifests this issue: plans have been in the forefront emphasising the creation of institutions and the development of projects, but when it comes to assessing what has happened, the details are much less certain. Figures of employment, FDI, sales and so on can be constructed from different sources (see tables 3 and 4), but most of the figures come from estimates and assumptions as some interviewees readily concede and how much confidence can be placed in these statistics is very unclear.

Over-embeddedness in terms of the presence of *wasta* and a lack of evidence of outcomes is present in REACH, but so is over-autonomy. Though the King is credited as the instigator of REACH, we have argued that his views were very close to those expressed by the IMF and the World Bank. What was expected of REACH has varied: at first, King Abdullah suggested that ICT FDI would make use of cheap Jordanian graduates who could be employed in Israel (King Abdullah 1999). REACH reports show that ICT FDI was emphasised in 2000 and 2001 with an increasing focus on other forms of ICT-enabled development from 2001 onwards (see REACH reports). Overseas consultants have been very important in all phases of the REACH process where they are credited in writing REACH reports and have taken leading roles in facilitating workshops.¹⁶

¹⁵ Jordan is given a score of 2.92 for anticorruption and transparency on a 0 to 7 scale where 7 represents strongest performance (McDermott 2005).

¹⁶ One example of a US consultant's unease in leading an infrastructure workshop in REACH 3.0 is his initial comment that he was 'new to Jordan' and apologizing for 'any misstatement of fact ... due to his newness in the country'. Another comment was made by a participant in REACH 2.0 that he had to

Chemonics is a good example. This US based consultancy company was prime contractor for AMIR and refers to it as '*Chemonics' AMIR program*' and comments that '[t]he USAID-funded AMIR program has been instrumental in supporting and implementing the REACH initiative. Through technical assistance and commodity support, AMIR has strengthened Int@j's capacity and enabled [MoICT] to lead the public sector in e-government implementation, infrastructure improvement, and IT sector development.' (Chemonics 2005). REACH has also been highly reliant on external donor funding with the future of REACH always dependent on funding from USAID (AMIR 2005b). Thus much of the policy and resource funding of REACH can be attributed to external agencies, particularly USAID, indicating over-autonomy in the programme.

So can findings of both over-autonomy and over-embeddedness in REACH be reconciled? Both issues are aspects in glocalisation processes around the REACH project where external agencies are becoming associated with and changing the role of the Jordanian state. While much was done in a very short period of time, the creation of projects, institutions and resources appear not to be able to produce the predicted rapid growth in the ICT industry. However, both external agencies and Jordanian institutions surrounding REACH have much to gain in demonstrating tangible changes often connected with institution building while downplaying the slowness of the development of an ICT industry. In this both over-autonomous programmes and agencies coupled with embedded institutions can agree.

One response is to question accountability in the REACH process. Ó'Riain (2004) shows that a developmental network state such as Ireland has multiple and overlapping forms of accountability. In Jordan structures of accountability are less evident and it seems that some agencies try and involve the King *in extremis* as a means of creating accountabilities (see Habayeb 2005; Khouri 2003). It appears that the strong leadership of the King, drawing on a complex mixture of tribal and modern state resources, undercuts the distributed accountabilities of a network polity. Put differently, the networked polity that appears to be in place continues to sit alongside hierarchical or tribal accountabilities that can be seen as positive – the ability of the King to enforce change – or negative given the presence of *wasta*, but either way represent state institutions that work in quite different ways than network polities described in the existing literature. In particular, it appears that the state retains enormous influence over incipient agencies.

REACH fits notions on the importance of institution building in developing countries and it seems that REACH is an example of an ICT-enabled development that seeks to develop civil society through the creation of new institutions (see Hoff & Stiglitz 2001). The lack of results points to a problematic assumption that applying new institutional forms alongside new technologies, of necessity, will transform societal patterns of developing countries (Evans 2004).

Much depends on historical relations that have developed between state, business and society. Others have observed that, in Jordan, state power remains paramount and

take the US consultant through material 'step by step so that he wouldn't make a fool of himself' (name withheld).

there are limits to the development of civil society (see Moore 2004; Wiktorowicz 2002; Yom 2005). REACH illustrates this and the issue of over-autonomy derives from the state's dependence on external revenue, while over-embeddedness appears to come from the reliance of civil society on the state as the distributor of patronage and income.

Two other dilemmas of institution building are those of creating institutions that continue through time and extend over geographical space. Jordan's precarious financial position effectively means that programmes such as REACH can only continue through external funding (see AMIR 2005b). At the outset REACH did not consider spatial issues in creating a Jordanian ICT industry and, in effect, this meant that Amman, the capital of Jordan, was being targeted. As the scope of ICT-enabled change has expanded, spatial issues (and issues of equality of access) have become more salient. The well-educated population is often cited as a key resource of Jordan (see REACH 1999) but it raises the question of what form that education takes. The potential beneficiaries from REACH are probably to be drawn from the educated middle classes of Amman though there is a continuing tension between what universities teach and what is seen as important for an ICT industry (Meeting: AbdelKhaleq 2005).

Apart from trickle down effects, the prospects are much bleaker for the large numbers that are unemployed or underemployed. For example, after graduating from basic computer training via the new Knowledge Stations many adult Jordanians were dismayed when they found they were not qualified to get jobs in the computer industry (Interview: Dajani 2005). ICT-enabled development with its slow and spatially skewed patterns of resource flows requires strong political skills to satisfy those who see little or no change – a majority of the adult population – while their children and, most significantly, sections of the middle class in Amman benefit. As a manager in a computer company candidly stated '*[t]he country [Jordan] is placing a bet on the IT sector*' (Meeting: Rimawi 2005).

The engagement of Jordan in REACH illustrates the problematic, identified by Cerny (1997), that a state using ICT-enabled development is both acting to promote enterprise and capitalist development while seeking to foster and retain a sense of unity and shared identity. The spatial and economic distributional changes that long-term ICT-enabled development *may* produce are a major concern of the state and are being addressed by programmes such as the Jordan Education Initiative and the Knowledge Stations coupled with the active intervention of the King to promote Jordanian unity.¹⁷

E3. 'Distance-Less' ICT-Enabled Development and the Jordanian ICT Industry

¹⁷ For instance in October 2002 the King instigated a 'Jordan First' campaign to unite 'citizens in "a unified social fiber that promotes their sense of loyalty to their homeland, and pride in their Jordanian, Arab and Islamic identity."' (Jordan Times 2002)

A key argument through this paper is that ICT-enabled development can be analysed as examples of glocal processes between external and national circuits of capital, labour, and infrastructure. In the REACH initiative, the original premise of attracting foreign direct investment in ICTs failed. No large overseas company has built a production facility in Jordan nor are there extensive capital investments by overseas ICT companies.

The failure of REACH to attract FDI could be simply seen as an issue of bad timing. REACH was launched in late 1999 and by March 2000 the Nasdaq peaked (see Table 2) and subsequently, the availability of capital for FDI rapidly dried up. This argument is one shared by our interviewees and the later REACH reports, and draws sustenance from the notion of a new economy, a world of flows, where distance and location are unimportant. In contrast, we argue that ICT FDI is not so spatially mobile and becomes linked into specific locations largely through non-market mechanisms such as state development institutions, state regulatory regimes and the presence of nationals working for transnational corporations who wish to retain links with their home countries (see O'Riain 2004; Saxenian 2005). Jordan had hardly any of these features in place in 1999 or 2000 which made glocalisation of transnational capital problematic. Since then, some of these aspects have developed in Jordan, but still large ICT FDI from transnational corporations remains elusive, despite the King, as head of state, actively courting the CEOs of large US ICT companies. Even when the US gave special trading status to Jordan, no large ICT investment was forthcoming. The instabilities of the region surrounding Jordan are an important issue (Meeting: Rimawi 2005) and one not in the control of the nation state. The example of successful ICT companies that Int@j promotes are ones which are mainly Jordanian-owned and run by Jordanians who have worked for long periods abroad in the ICT industry and use their networks of contacts to develop their companies.¹⁸ It appears very difficult, despite the rhetoric of 'placelessness' and 'distance-lessness', to leapfrog into strong glocal arrangements with global ICT capital without both economic conditions and a variety of non-market institutions and mechanisms including the nation state's capability to transform to accommodate these global flows.

Yet, Jordan has been very successful in attracting flows of resources for ICT-enabled development, but these networks are resourced by external agencies which are either quasi-governmental such as USAID, or global agencies such as the World Bank or the World Economic Forum. Several ICT transnational corporations, including Cisco and Microsoft, are present, mainly as contractors, providing hardware or software systems with some involvement of local Jordanian companies, and donating aid to not-for-profit organisations. The rhetoric of these developments is to transform public provision, but these glocalisation processes are different than those discussed above as private global capital is not being invested (or risked). Instead, countries such as Jordan have become small but lucrative markets for large ICT companies whose products are being put in place based on the advice of external consultants (Meeting: El-Saeed 2005). This is a substantial bet for some, but not for others.

As Swyngedouw's quote at the beginning of this section illuminates, this rescaling of the Jordanian state and these glocal processes entail a shifting of networks of

¹⁸ Two good examples are Estarta and Esadenia.

resources within and outside the nation state. For transnational corporations and international consultants, their external expertise and products are deployed and paid for, based on expectations that what is being proposed has already worked in developed countries.¹⁹ These glocal processes are mediated by changes in the state and institutions which create resources and expertise within countries such as Jordan though these benefits are strongly skewed towards an educated, often externally educated, middle class.

ICTs are credited as key components in the 'death of distance', enabling flows of capital, labour and materials, and diminishing the role and scope of nation states (Cairncross 2001; Ohmae 1995) and yet geographical proximity is paradoxically seen as critical in the establishment of clusters of development (Bresnahan & Gambardella 2004; Porter 1998). What we have is not an either/or situation but new forms of relations that enfold digital mediated exchanges with relations based on close proximity or, as Morgan (2004) puts it, the death of distance argument conflates the spatial reach of ICT-mediated exchanges with social depth and the social reciprocities that are entailed. This conflation is also highly political.

The viewpoint known as the Washington Consensus presumed that market forces were of key importance for economic and social development (cf. Gallagher 2005; Gore 2000) and thus the role of the state was one of accommodating market-based economies while moving its activities from state provision to private companies. More recently, a post-Washington Consensus has been formulated²⁰ that places an emphasis on the role of institutions within the state, competition, as well as liberalisation and privatisation (Gore 2000; Stiglitz 1998). REACH exemplifies many of these policies as do the recent prescriptions of the IMF and World Bank for Jordan (Hassan & Al-Saci 2004; IMF 2004). Such policies gain credence, and draw on arguments that globalisation, ICT-enabled developments, institutional reform and market-based policies, enable new, often ICT-related, investments to transcend distance and invigorate local economies while, at the same time, allowing local companies to trade internationally.

Glocal processes mediating global flows and the infrastructures and resources of the local state are not simply a matter of free markets seeking the best returns wherever they can be found, sustained by the capabilities of ICTs and blind to geography. The role of institutions and historical relations within the state, often non-market-based, are critical to these glocal processes; Jordan shows that new institutional forms are, in themselves not a panacea. States are not powerless in face of processes of globalisation (Weiss 1998) but they are responding in different ways as essential components within a dialectic of globalisation. How this is done cannot be simply read off from other nation state experiences: glocal processes are specific to time and place. But the myth of the powerless state has its counterpoint in the myth of global capital flows and specifically ICT FDI being market-based and therefore *potentially* accessible to any country. Once again there is a conflation between spatial reach and social complexity: the attraction and retention of external agencies as well as

¹⁹ This is an area where academia can play a part in creating and disseminating critical accounts of ICT-enabled developments in developed countries which engage the rhetorics of consulting companies and vendors of ICT products.

²⁰ For different formulations of what this might be see Santiso (2004) but the best known proponent is Joseph Stiglitz (1998).

transnational corporations depends on a variety of institutional networks and historical contingencies that enable glocal processes to take place. For Jordan these are complex and included the highly publicised actions of the King, regulatory changes, the creation and activities of a rather unusual network polity of private and public sector agencies, historical circumstances, external agencies, Jordan's strategic geopolitical position, and the probably significant roles of Jordanian transnational communities. Yet, none of these have worked in attracting and retaining significant ICT FDI or developing a major export-based industry while, on the other hand, the rhetoric of ICT-enabled development has assisted flows of resources as aid into the country whose stability depends on the state having external sources of income.

F. Conclusions

Informational capitalism provides the promise of connection and inclusion for countries whose previous geographies and histories left them in a limbo of poverty. But how global flows embed in specific territories remains elusive. ICTs both enable connection and are resources for rhetorics of development which developmental states can make use of to further the glocalisation of global flows of capital, expertise and information. Transnational companies need nation states to reinvent themselves as sites for productive investment and rescale to assimilate frameworks of regulation such as the WTO. A select few countries have become highly-developed sites of ICT FDI, but most lag far behind.

Jordan shows ICT-enabled development to be enfolded in political, economic and cultural processes. A developmental network state seeks to plan its development strategies while finding ICT-enabled development is linked with the creation of new institutional forms, the valorisation of the private sphere, and a consequential diminution of the role of the state. However this is put – as the development of civil society or reducing poverty through inclusion – the developmental network state has to rescale its activities, accept the demands of external agencies such as the IMF or the WTO, and be complicit in the creation of a network polity. Evans argues that embedded autonomy is a key feature in preserving the state's ability to plan while engaging business and civil society. This is a useful corrective to free market dogmas of the distance-less and placeless capabilities of ICTs on the one hand, and the expectation that development depends on creating new institutions and institutional change: monocropping as Evans (2004) terms it. Jordan starkly shows these tensions.

This is a country that is 'placing a bet on the IT sector' in an unstable region in which the state cannot afford to relax its control of civil society as the expectations of ICT-enabled development might predict. Instead, though prescriptions for change, REACH, e-government, and others, are taken with each initiative, glocalising flows of resources, the embedding of these initiatives and the expected economic and social change remain slow to materialise. In part, this may be an unwillingness of the state to cede agency to civil society (Wiktorowicz 2002) but it may also, drawn from long years of historical precedent, be difficult for civil society to accept new forms of agency expected of them (see Moore 2004). Perhaps, a slower pace of change enabled by ICTs is more likely to embed successfully in Jordan.

For studies of ICT-enabled development, this paper argues that the complexity of glocal processes shows how difficult it is – conceptually or in terms of policy prescriptions – to model ICT-enabled development. Equally problematic are ideas of ICT-enabled development as a distance-less activity in a world of flows where any state potentially can become a recipient of ICT FDI. The idealisation of a neo-liberal market global economy works through the density and specificity of glocal processes that are social, political and economic. The experience of Jordan can illustrate the role of the state in seeking to develop ICT industries, but due to the specifics of time and place, these particular experiences cannot be generalised. What can be generalised however is a mode of analysis of the role of nation states within a dialectic of globalisation and consequent possibilities and limitations for states engaged in ICT-enabled development.

Acknowledgements

Chris Westrup and Saheer Al-Jaghoub would like to thank all those who were interviewed for their help and hospitality. We also would like to thank Heba El Sayed, Debra Howcroft and Brian Nicholson for comments on previous drafts of this paper. Chris Westrup would also like to acknowledge the support of the ESRC research grant "The Role of ICT-Based Applications in Business Knowledge Processes".

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