

## **EXPERTISE DETERMINATION AND SELECTIVE FORGETTING: ICT INITIATIVES AND POLICY IN DEVELOPING COUNTRIES**

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### **ABSTRACT**

This paper argues that ICT for development research can benefit by increased attention to relationships which seek to set out what ICTs can and cannot do. These are not simply a function of the technology – the inscriptions in technology design – but arise from the interaction of technologies and economic, political and social relationships. It is the mediation of technologies that is of interest here: who speaks for them; re-arranges the context; describes their benefits. These are processes of entanglement and disentanglement in which the notion of technology as figure and ground is helpful. Turning to the example of Jordan's state led policy on ICTs we find that donor led expertise is not challenged and that prior experience with ICTs within Jordan is selectively forgotten. This expertise determination and selective forgetting is important in enabling new projects and technologies to continue at the cost of limited learning from the experiences either within Jordan or elsewhere. Focusing on the mediation of technologies in this case gives insight into questions of the benefits or problems of ICTs for development.

# EXPERTISE DETERMINATION AND SELECTIVE FORGETTING: ICT INITIATIVES AND POLICY IN DEVELOPING COUNTRIES

## 1. INTRODUCTION

In a recent edited book, Kevin Gallagher points to a ‘shrinking of policy space’ for governments arguing ‘that the current [global] trading regime is restricting the ability of developing countries to put in place the proper policies to raise standards of living in their countries.’ (Gallagher 2005: 10). ICTs are often claimed to be a key component of development and the provision of information important in improving the lives of the poor (see, for example, Jensen, 2007). The question this paper poses is how do ICT initiatives, on the one hand, and government policy on the other, engage to demonstrate benefits from ICTs?

One claim, seen in practice in the experience of countries as diverse as Ireland, India and the Philippines, takes the characteristics of ICTs as collapsing the importance of space, and enabling software development to occur more or less anywhere. This, perhaps, is a classic expression of trade theory going back to David Ricardo who suggested that countries specialise in what they can produce best and at the lowest cost. As communication costs have reduced and software, as a product, can be transmitted easily, then, in theory, any country can specialise in software production. Is this an example of a meritocratic and egalitarian ideal similar to Napoleon’s classic adage that ‘every soldier carries a field marshal’s baton in his knapsack’? Many countries would like to think so and there are a plethora of national initiatives in developing countries which seek to maximise their advantages as a place for software production (see Carmel, 2003). The time is ripe for a systematic appraisal of such policies, but the scope of this paper is less ambitious and seeks to put forward the argument that ICT initiatives and studies of ICT in developing countries are improved by an awareness of the socio, political, and economic characteristics of the circulation of ICTs. Arguably, we are never in a position to discuss ICTs as a natural or pre-given category, rather their constitution and contribution is framed in debates, exemplars and disputes which seek to provide a set of capabilities. This is more apparent in national or international settings in which contribution and policy fold together. Thus, the why and the how of ICTs and their relation to development are intertwined and need explanation together. To that end we use the example of Jordan’s programme to develop a software export industry to show the benefits of improved analysis to understand the outcomes of this programme and its implications as to how ICT initiatives and government policy interact.

## 2. STUDIES OF DEVELOPMENT

It is perhaps not too simplistic to claim that the history of ICT for development is primarily one of seeking to adapt, improve, and develop technologies for developing countries. Toyama and Dias (2008: 23) argue that this history is one of contradictory expectations. One is the idea of ‘leapfrogging technological solutions’ enabling developing countries to develop rapidly while the other is of continuing programmes to find new ways to apply established technologies. How far reaching these changes are is a matter of debate. Ernest Wilson (2004: xi –xii) refers to massive changes,

what he terms strategic restructuring, which he suggests are ‘being driven on the ground by local information champions who struggle daily to overcome local apathy as well as entrenched opposition to the *revolutionary* reforms they propose.’ (our emphasis) Continuing change remains synonymous with ICTs. The recent example of the rapid rise of mobile use is but one instance which led the Economist to propose that the digital divide is already disappearing as over half the world’s population has access to mobile phones (Economist 2005). However, it is easy to see this as contained in an analytic framework in which the focus of attention is on technologies from developed countries being applied in developing countries which are then to be understood drawing on theorisation from the self-same, developed countries (see Tsui, 2006). How an ‘other’ of local technologies developed and described through local understandings might be recognised, let alone produced, shows the difficulties with such an argument and how the travel of ideas and technologies render notions of the local increasingly suspect.

Avgerou (2008) in her survey of ICTs and development identifies three distinctive discourses. The first, and predominant, discourse, shares a view of technology as objects capable of being transferred to developing countries. The second addresses the appropriation of technologies in a dynamic of adaptation within the context of use. Avgerou describes this as social embeddedness. If the first discourse can be claimed to be the circulation of universals, in which the beneficial (or otherwise) qualities of technological objects are transferred, the second can be seen as addressing the importance of the local and how technologies are (or can be made) pliable to embed in specific situations. A third discourse for Avgerou is one of transformation whose distinctiveness rests on its interest in how the context of development in which ICT is deployed is itself changed. Such a move has interesting implications. For instance an important one is the questioning of culture and particularly cultural frames of reference. Culture turns out to be a dynamic, contested, and multiple. Furthermore, as a construct, its usage in understanding the local draws attention away from how culture is performed. As Kuper (1999: 245) puts it ‘[c]omplex notions like culture, or discourse, inhibit an analysis of the relationships among the variables they pack together.’<sup>1</sup> Avgerou invites us to look at ICT usage both more carefully and at the trajectories of ICT artefacts.

Acknowledging that discourse itself is shot through with contradictory elements (for a review see Wynn et al 2002) what might we say about a transformative discourse? One mode of analysis is to take it as attempting to hold both global and local in the same conceptual lens. This is intriguing ground as it can consider how the global is constructed and made mobile and, symmetrically, how the global becomes local or embedded. In discussions of systems development it is paying attention to the world(s) of design and that of implementation. A slightly different stance is to become aware of mediation; how, and by whom, are claims made of ICTs and properties assigned?

Whilst diffusion sees technologies and ideas as moving outwards from an original invention or thinker; translation, while recognising this movement, implies that the travel of ideas or technologies involves change (for example, Czarniawska & Sevón 2005; Latour 2005; Thrift 2005). Each use of a technology is an appropriation which

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<sup>1</sup> We can note wryly in passing the implicit critique of discourse.

becomes specific to that place and time while ideas too are changed in being taken up by others. The expectation then is that technologies and ideas necessarily change in their travel from North to South and yet it is also expected that recognising such change may be difficult. Often, companies or governments invest financially and *symbolically* in new technologies as exemplars of progress and modernity and to suggest that they are different in their application could be construed as a sign of weakness rather than, what we would claim, a sign of strength. Weakness is recognised because technologies are applied in ways that go beyond what design envisaged (Akrich 1992). But why a sign of strength? If the travel of ideas or technologies is one of continuous translation then it is, but a small step, to argue that it is one of learning in which those taking up these technologies or ideas are *active* rather than passive recipients. This is more than an adaption to a set of local cultural values as a stream of literature suggests (for a review see Walsham 2001). It is, drawing on Callon (1998), a process of entanglement without which ideas or technologies cannot work as a necessary engagement with local contingencies and practicalities is what can be seen as providing benefit from their introduction and use. Equally, and on other occasions, a process of disentanglement must occur when items are produced that can be taken up and circulated elsewhere. Latour (1999) provides an interesting example of how the soil of the Amazonian rainforest is collected, measured, inserted into standard descriptions, for instance, of soil colours, and may then circulate as part of scientific knowledge. For ICTs the example of Health Information Systems Projects (HISP) show similar characteristics as the disorder of sick people is diagnosed, classified, transformed into information to be further collected into digital resources for future interrogation.

A second move, drawing on the first, is to suggest that the revolutionary change coming from elsewhere is too strong a claim. This may, at first, seem to be counterintuitive. To return to the example of mobile phones it is clear that a major change is taking place in the way in which people communicate, organise and are accessing information. However, even here, a range of local services, political and legal agreements, physical infrastructures and so on have to be agreed and put in place. This entangling draws on existing resources, be they convincing local politicians, using a specific communications infrastructure, ensuring that a legislative framework is in place, to take three examples. In short, any technology has become linked into existing arrangements which are themselves changed in that process. The upshot of these claims, of translation, disentanglement and entanglement, is to encourage detailed analysis of examples of the introduction of new technologies and the use of existing ones. In both cases, we suggest that considerable skills are being learnt or deployed in making technologies work in ways that are seen as productive in the local setting.

However, we can go further, drawing attention away from the technology as object and to its wider relations. A way to look at this issue is to think in terms of figure and ground (see McLuhan 1967). Marshall McLuhan famously suggested that the medium is the message; in other words, focusing on the figure of message ignores the importance of the medium as ground which enables the message to occur. A well known example is that of the car on a highway. Rather than just paying attention to the car and its passengers, McLuhan sees it as just figure enabled by a ground of highways, petroleum companies and filling stations, car makers; legislative arrangements and so on. Systems seen as revolutionary ICT systems or even the

movement of and incremental improvement of more established technologies can be addressed as figure, but a more thorough going analysis, understands them as a relationship of figure and ground. In this sense it is important to address social, political, economic and cultural issues in ICT deployment and use. Such an analysis returns us to the role of states and political (in)action in ICTs for development.

### **3. FACTORS OF DEVELOPMENT**

The recognition of ICTs as a factor *for* development has also provided the state with new roles. First, states, looking at the exemplars of Ireland, Singapore, or India, seek to develop strategies to encourage foreign direct investment (FDI) in high tech areas within their countries (Nicholson & Sahay, 2003). Second, a growing international awareness of ICTs as a means in themselves as a mode of development has stimulated a number of initiatives aimed at using ICTs to enhance educational possibilities and to reduce poverty (World Bank, 2003). Turning to IS academic publications, 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; Watson & Myers, 2001) or engaged in creating or using models of software industry success factors to analyse specific countries performance or future potential (Carmel, 2003; Heeks & Nicholson 2004). Both approaches have strengths but are limited by a lack of engagement in how change has been or could be initiated and by sidelining socio and political issues in development.

There are several examples of the second approach (Carmel, 2003 Heeks and Nicholson 2004; Nicholson & Sahay, 2003). For example, Heeks & Nicholson (2002) distil the experiences of the three I's (India, Israel, and Ireland) into a software export success model which identifies a series of causal factors. These are international demand and factors at a national level – a national software vision that has effects on national factors such as people, research and development, technology and finance which in turn effect the national software industry which in itself has three key factors – competition, collaboration and clustering. They argue that for countries, which are late entrants into this market, national government should develop a series of policies to produce a supportive infrastructure in accordance with the software export success model in the areas of education; investment/foreign investment in telecommunications; encouraging foreign investment; enabling free movement of information and investment/subsidies for research and development. Carmel (2003) extends this model (see figure 1) which he argues is of relevance to countries with small software exporting industries.

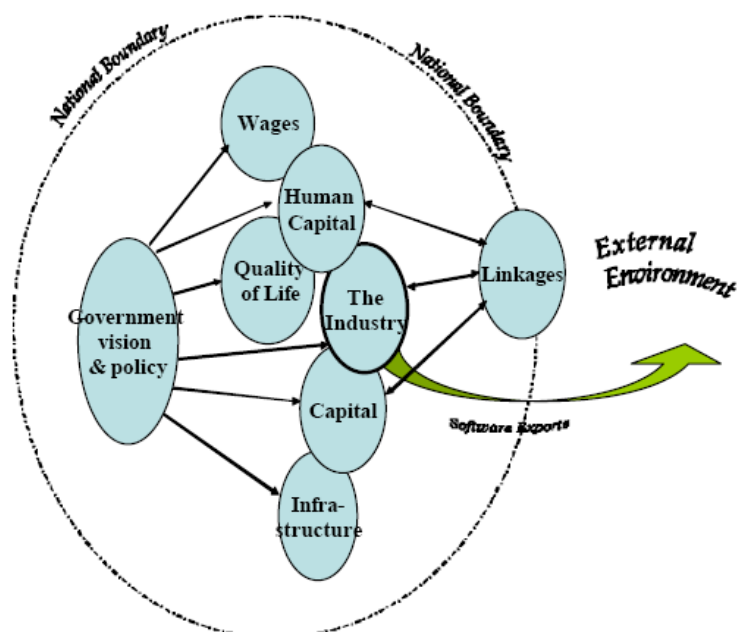


Figure 1: The oval model of national software export success factors (Carmel, 2003: 3)

In figure 1, two points are of interest: first, government vision and policy is seen as driving all other factors in the model – Jordan is mentioned as an example, and second, linkages outside the nation are found in the specific areas of human capital; the software industry and financial capital.

These models are useful in synthesising the experience of a number of countries in developing software exporting industries. Carmel (2003a) draws attention to these issues using a four tier taxonomy of software exporting countries from a first tier of countries with large and mature software industries, for example, many OECD countries and newer entrants such as India, to a fourth tier with very small software exporting industries such as Jordan. So, for instance, it is clear that the presence of existing software industries have major effects on countries developing industries in these areas which are difficult to specify in a success factors model. A related strand of inquiry explores the topic of liberalisation of trade and the growth of the computer sector which was the topic of a special issue of *The Information Society* in 2001. Kraemer and Dedrick (2001) argued that liberalisation is a necessary first step to gain access to international markets, technology investment and foreign investment. Liberalisation must not be restricted to the computer sector but should include telecommunications though, they caution that, one country's experience cannot be simply be followed by another country. Even after liberalisation, they contend that there remains a role for government in enhancing capabilities in education, telecommunications infrastructure and support of science and technology. In another article, Dedrick et al (2001) reviewed the experience of Mexico and argue that though liberalisation was a necessary first step which led to the diffusion of information technology throughout the economy, the absence of a national IT policy led to the demise of much of the local PC industry.

These approaches are useful, drawing attention to conditions that have important consequences on the development (or otherwise) of ICT in Southern countries, but

they have their drawbacks. There is a certain ambiguity around issues of *how* ICT are to be developed. A major focus is on policies to be adopted by nation states, but these recommendations are advanced in economic and political climate when state action has been restricted by ideological beliefs on the efficacy of markets and by prescription from an international trading regime which limits the action of governments to support their economies and prevent access to their developing markets. Such models are not clear guides to which policies should be adopted and their focus on generic simplicity reduces their relevance to the specific issues of individual countries at a certain time and in a certain location. To illustrate how another approach, drawing on the theorisation discussed earlier, can be useful, we will turn to an ICT initiative in Jordan and how it was entangled with political, social and cultural aspects of this country.

#### **4. THE ICT REACH INITIATIVE AND JORDAN**

Investigating specific examples of ICT and development becomes complicated when we adopt the theoretical precepts suggested earlier. We are left wondering what is the object (as we expect it to be subject to change); where to look; and when can we stop looking. As one academic remarked recently, a problem with this type of approach is that you are left with everything connected to everything else. This, perhaps, is a profound remark but leaves us with a serious methodological dilemma. Can we provide a method of investigation? The approach taken here is to take a specific ICT policy of a developing country, investigate how it was framed as providing benefit, and conduct a longitudinal study of its effects. Particular attention is placed on the expectations placed on ICTs through expert opinion and aid driven development, and a curious lack of interest in the outcomes of past projects.

Jordan is a small, virtually landlocked monarchy with a population of over five million. The country was established after the First World War and it is surrounded by more populous neighbouring states – Iraq, Syria, Israel, Saudi Arabia and the unresolved issue of the West Bank. Jordan has had a chequered economic past and remains a middle income country with no petroleum wealth, dependent on Iraq for oil supplies. Its greatest asset is usually considered to be its population who are well educated but who have often emigrated to find well paid employment. In 1999, after a long reign, King Hussain died and he was succeeded by King Abdullah II who was educated in England and the US and has a long association with the Jordanian army. King Abdullah quickly initiated a number of policy reforms which resulted in Jordan entering the World Trade Organisation (WTO) in 2000 and setting up free trade agreements with the US and the European Union in 2000 and 2001. Politically, policies were introduced that led to a certain increase in democratic accountability. It was in this atmosphere of change and expectation that Jordan launched its plans to develop a software exporting capability and to promote the use of information technologies in government and education.

Jordan has been described as a semi-rentier state (Yom 2005). A rentier state refers to countries in which the government has a source of income other than taxation of the people: usually it describes countries with rich natural resources such as oil, diamonds or minerals. In development terms such states often have poorer development outcomes than expected as resources are appropriated without any clear accountability to the population at large (see Collier 2007). A semi rentier state has some common

attributes with the government being the predominant provider of resources to the population. In Jordan's case much of these resources derive from developmental or military aid. The problematic for a semi-rentier state is whether substantial control of revenue generation and distribution by government is to be maintained to retain stability or whether other foci such as an entrepreneurial base developed through economic liberalisation, or an articulate civic society developed through allowing freedom of expression and association, are allowed to expand and perhaps bring into question the current status quo. In Jordan cultural and political attitudes have tended to coalesce around a strong central administration, headed by the King, in which the stability of the state, in a turbulent region, remains paramount. However, new opportunities for employment are important, and ICTs were seen as a new possibility to develop skilled jobs for an already educated population. Drawing, it appears, almost directly from thinkers such as Manuel Castells an early policy document, produced by US advisors, identifies ICTs as an important source of potential employment as an activity that does not take account of geographical location (REACH 2000).<sup>2</sup>

The first ICT initiative, named REACH, began in 1999 and continued to 2005. It was co-ordinated and led by a new industry group, Int@J, brought together for this specific purpose. Int@J had membership from different companies engaged in ICT activities in Jordan and had representation from the Jordanian government. It produced a series of reports which analysed the issues, set out policies to be adopted, and monitored results (Westrup & Al-Jaghoub 2008). Int@J was financed through the AMIR (Achievement of Market Friendly Initiatives and Results) programme which in turn was financed by USAID (US Agency for International Development). The analyses and policies adopted by Int@J drew on foreign management consultants who mainly came from the US. The Jordanian government acted on a large proportion of the legislative recommendations from REACH and, in response, created a new ministry MoICT (Ministry of Information and Communication Technology) with responsibility for digital and telecommunication policy and implementation within government. This quickly led to ambitious programmes to restructure and digitalise government in an e-government programme, to provide digital resources and substantial e-learning facilities in schools, and to create 132 centres known as Knowledge Stations where members of the general population to learn ICT skills, access the Internet for specific activities and use government electronically enabled services.

REACH had ambitious targets for 2005: employment in the ICT sector was to grow from less than 4,000 in 1999 to 30,000 and export revenue was to grow from less than \$40 million in 1999 to \$550 million. A final appraisal of the REACH programme was never produced, but figures in a later report show that 16,000 were employed in the ICT sector in 2005 and export revenues were \$162 million (Int@j 2007: 57). How these export figures are arrived at is not very clear. Our research identified a number of companies exporting primarily to the Gulf States, but no FDI was generated that led to an export driven software industry. Interestingly total ICT revenue, which includes domestic consumption, comes to \$580 million in 2005 and indicates that the

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<sup>2</sup> The details of the research which this paper draws on are discussed in Westrup & Al-Jaghoub (2008).

bulk of the growth in ICT was in an increasing consumption of ICT products and services *within* Jordan.<sup>3</sup>

What are we to make of the REACH programme? Despite failing to meet the targets set in 1999, the figures produced in 2007 show that Jordan has had extraordinary growth in employment, in export revenues and in total revenue in the sector. REACH did not attract substantial investment from large overseas companies in either research or production facilities. The initiative triggered a restructuring of the government ministry (MoICT) and fostered collaboration amongst private sector companies and between them and the government through the creation of Int@j. In short the REACH initiative and the new role that ICTs were recognised to play have led to significant change in Jordan. However, this discussion of REACH has focussed on ICTs and, in particular, on policy to develop an ICT sector. Returning to notions of disentanglement and entanglement, the REACH initiative can be read somewhat differently.

It is perhaps fortuitous that the accession of the new King coincided with the height of what we now know as the 'dot com' boom in which ICT enabled change became conventional wisdom. However, how this was important to Jordan had to be made clear. An initial view in 1999, articulated by King Abdullah, was that educated Jordanians could be 'bodyshopped' to work in Israel (King Abdullah 1999). It was a few months later that the idea of Jordan as an ICT enabled nation became prevalent. It appears that the view of ICTs enabling distance-less development arose from the involvement of US based consultants on the initial REACH proposal. The participation of Int@j, as a newly convened private sector association charged by the government with developing REACH, in an important government backed policy initiative has no historical precedents within Jordan. One plausible interpretation is that the financial backing to develop REACH came from the AMIR initiative which was premised on expanding the role of markets and of civil society. Thus, for REACH to be funded, the private sector driven model had to be adopted and US based expertise had to be incorporated. If these points were important to obtain funding, for REACH to prosper, it had to be congruent to emerging Jordanian government policy and existing commercial interests in the ICT area. REACH was, at the time, seen as an exemplar, of a liberalisation and reform of previous policy towards inward investment. Accession to the WTO soon followed and Jordan's market underwent reshaping by, for example, having new legislation that protected intellectual property. Jordanian commercial interests in the area were kept engaged by being in Int@j which was guiding policy in the ICT area. They could have been severely damaged by an influx of new competition, as happened, for example, in Mexico (Dedrick *et al* 2001).

One interesting approach to explain these processes is Cerny's notion of the competition state (see Cerny 2007). States, he argues, have become more exposed to competitive pressures and, in response, have had to reinvent themselves either from being inward looking welfare states concerned with issues of re-distribution or from developmental states with national policies to develop specific industries. A competition state both seeks to develop its industrial and commercial interests and does so in relation to international pressures from multinational agencies and a global

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<sup>3</sup> The data sources for these figures are not publically available.

trading system. Jordan, it appears, can be seen as such a state (see Al-Jaghoub & Westrup, 2003), but a limitation of this analysis is that it is rather non specific and tends to assume that institutions within the state will work together in a competition state. What we suggest here is that Cerny is right to draw attention to how government policy is often shaped around ideas of competitiveness though *how* different agencies are brought together to entangle technologies and create institutions is particularly important.

The REACH initiative, at the time of its inception, we suggest was congruent with the aspirations of a new Jordanian government to find ways to modernise Jordan and provide a source of employment for its well educated and under employed population. It also turns out that REACH follows the precepts of what is known as the post Washington consensus: a reliance on the market and liberalisation as mechanisms for development and the establishment of non governmental institutions to foster such development (Stiglitz 1998; Gore 2000). Thus, Gallagher's comment, which began this paper, on the shrinking of policy space for governments in a global trading regime has resonances with the experience of Jordan and its policy on ICTs. One illuminating comment came when we asked the Ministry Head of MoICT whether reliance on external experts was always the appropriate way to garner knowledge and policy advice. Her response was one of surprise that experts would not present policies that were appropriate for Jordan and helpful for its development. We, perhaps, were expecting a more nuanced reply which recognised that a divergence of expert opinions was to be found and that the role of MoICT might be to sift through a variety of policy advice. Thus, the absence of policy space identified by Gallagher may be, what we can term, an expertise determinism, in which the resources or capabilities to question external policy advice is lacking and where such advice is acted upon in, perhaps, an unreflective way. Such a shrinking of policy space is exacerbated when there is a confluence of sources of funding and policy advice which is widespread in development and found in this instance in Jordan. Cooke and Dar (2008) refer to development managerialism whereby the creation of a professional cadre of development managers and their projects run the risk that development becoming an end in itself. ICTs, given their perceived technical complexity, are even more likely to be less subject to questioning and debate. This is, of course, a re-running of a long standing argument in technology and organisational studies in which the very term technical is predicated on an inability to subject it to question (Woolgar 1991). One elaboration of this debate is a recognition that the ability to question technology varies; so, for example, workers were less able to question a new technology initiative than senior management. Likewise it seems important that policy space is actively created through situations whereby the givens of expertise determinism can be subjected to argument and debate.

We might legitimately ask, if REACH was, to some extent, an appropriation of funding led development advice characterised by a somewhat unreflective acceptance of policy initiatives, how does ICT policy evolve and new policies come into being? In 2007 a National ICT Strategy for Jordan was published which set out policies for ICT to be 'a major driver' for the economic growth of Jordan (Int@j 2007:1). This policy sets out an agenda for the years 2007-2011, is written by Int@j; used a set of consultants and funding from USAID, and proposed a partnership between Int@j, the MoICT ministry and the Telecoms regulatory commission. Many of these features are very similar to REACH, but curiously only one mention of REACH is made in the

new strategy. In this instance it appears that when new policies on ICT are developed they share many characteristics of what went before while not publicly identifying what can be learnt from the experience of previous policies. A combination of expertise determinism and, what we may term, selective forgetting may be useful in articulating new policy, but runs the danger of neither coming to terms with past experience nor being able to address current and future difficulties. Perhaps such a stance is useful in providing sufficient interpretive flexibility in the implementation programmes providing the obverse of the lack of policy space previously identified. Policies may be more inflexible in their articulation, a clear example of framing, but their implementation remains highly contingent and therefore capable of the necessary entanglement in the changing cultural mores of Jordanian society.

## 5. CONCLUSION

This paper began by setting out a dilemma of how ICT initiatives and government policy interact to demonstrate the benefits of ICTs. Our conclusion may not be very palatable. We suggest that Kevin Gallagher is correct in identifying a shrinking of policy space for countries in the domain of ICT policy, but this, we put down to, what we call, expertise determinism; a framing and an unreflective acceptance of one strand of policy advice. This coupled with a selective forgetting of the consequences of past policy initiatives can limit collective learning of the scope and benefits of ICTs in development. However, it is worth recognising that a positive feature of this approach is that it allows for considerable interpretative flexibility in how policies are to be implemented and thus help ensure that the entanglement of these policies is more likely. This, we suggest, was the case in Jordan, and it would be interesting for further research to see whether similar patterns emerge in other countries.

More generally, we would like to suggest that a focus of research should be not just on ICTs but on how their capabilities are framed and become entangled in the ongoing political, economic and cultural aspects of society. If that entanglement is taken as productive then we can claim that ICTs will work; if, however, the ICT initiative fails to garner the necessary relationships with the practical concerns of the local society, more often than not, the initiative will fail. Rather than see this as one of content and context, this paper considers the study of ICTs as one of figure and ground. A prediction arising from this approach is that we will only be able to understand the implications of any ICT project if we consider both figure and ground. Put differently, economic, social and political issues are central to any understanding of the contribution of ICT for development.

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