

SOCIAL  
SCIENCE  
AND  
POLICY  
BULLETIN

Winter 2011



School of Humanities,  
Social Sciences and Law  
Lahore University of Management Sciences



## Social Science and Policy Bulletin

VOLUME 2 No. 3

(Winter 2011)

ISSN 2073-6789

### Editorial Board

*Anjum Alvi*

*Syed Turab Hussain*

*Maryam Khan*

*Mubammad Farooq Naseer*

*Nadia Mukhtar Sayed*

*Hammad Siddiqi*

### Editorial Assistants

*Kiran Javaid*

*Usman Liaquat*

*Mariam Tareen*

The opinions and views expressed here belong to the individual authors and do not necessarily reflect the views of the editors. Some rights reserved.

The *Social Science and Policy Bulletin* is published quarterly by the School of Humanities, Social Sciences and Law at LUMS. It provides a forum for debate on the economic and socio-political issues pertaining to the formulation and conduct of public policy as well as its impact. The Bulletin aims to disseminate, to a wider audience, high quality research and policy-oriented work being done by social scientists. The editors of the Bulletin welcome short essays, either analytical or quantitative, that are relevant as well as intellectually stimulating.

### In this Issue

Editors' Note	1
Understanding Claims of Citizenship and Religious Education in a Historical Context <i>Irfan Muzaffar and Faisal Bari</i>	2
Class, Caste and <i>Marla</i> Housing Scheme in Rural Punjab <i>Haris Gazdar and Hussain Bux Mallab</i>	7
Age at Marriage and Childbearing in Pakistan <i>Ayesha Khan</i>	13
Industry Agglomeration and Spillovers in Pakistan's Manufacturing <i>Abid A. Burki</i>	19
Research Notes	25
Revealing Facts	
I. Cost of Doing Business	28
II. Human Development	30

## Editors' Note

Never before in Pakistan have there been so many synergistic possibilities between the academia and the policy world. That many social science researchers and academics are simultaneously donning the hat of policy advisor reflects a kind of maturation in the understanding of research as a vehicle for social transformation. The policy-oriented questions this issue asks are reflective of this transformative potential of research. Fittingly, these inquiries also provide intriguing insights into some of the most pressing concerns of contemporary Pakistan: land reform and access to land, literacy and citizenship, women's rights, and industrial growth.

At the same time, the articles in this Bulletin also demonstrate how evidence-based research is breaking down disciplinary barriers for a more holistic approach. Take the example of the social functioning of law. The grand narrative of the 'rule of law' in Pakistan aspires to a law that is neutral, impenetrable, self-ordered and autonomous. But as some of these articles show, law is not only indeterminate and heavily contested, it is perpetuated by underlying political and economic structures that in turn influence its distributive social impact. Law is thus as much a political construct as it is a social and economic one, and must be studied in that spirit.

The growing interdisciplinarity of research output allows for a panoramic view of the social and historical factors that constantly animate development and policy interventions. Quite apart from capacity and resource constraints, most policymakers operate within limited time horizons that inhibit any meaningful possibility of widening the policy discourse. Researchers can help remedy these limitations by 'zooming out' (to borrow a phrase from one of the articles) and providing a bigger frame of reference for contextualizing issues of social and development policy.

For instance, Muzaffar and Bari's article on the growing chasm between education for citizenship and religious

education explains the current political contestation over the goals of education by situating the latter within the pre-independence objectives of anti-colonial dissent. By emphasizing the historical context of this contestation, the authors attempt to understand the political imperatives behind educational opportunities available in Pakistan. In a similar vein, Gazdar and Mallah's article on the significance of the 'class-caste conjunction' in rural Punjab highlights the projection of traditional hierarchies on policy decisions relating to redistribution of land through the historical lens of colonial law and pre-independence census design. On the basis of ethnographic study of factors affecting land distribution over time, the authors provide visibility to discriminatory practices that have hitherto been largely absent from public discourse. Khan's survey-based article on the link between women's age at marriage and their reproductive health re-focuses the narrow debate on maternal health to larger issues of socio-economic disempowerment of women, and argues for an increase in the legal age of marriage as part of their reproductive rights. Burki's article on the trends in the geographic concentration of manufacturing industries also raises larger distributive issues about spatial disparity in economic development while questioning de-contextualized policy instruments that remain unevaluated through empirical research. Ultimately, this 'zooming out' opens up rich vistas of information that can help push law and policy in the direction of more socially relevant and integrated interventions.

## Tension and Accommodation: Understanding Claims of Citizenship and Religious Education in a Historical Context

By Irfan Muzaffar and Faisal Bari



The difference between religious education, imparted largely by *madaris*, from what is termed 'mainstream' education provided by other kinds of schools, both public and private, has attracted significant attention in the past few years. We feel that the current debates on this tension, with their tendency to focus on the present situation, would be better served if placed in the larger historical context. We argue that choices made in the colonial period set the basic parameters for some of the later developments. The situation was not helped when the inherited tensions between state-approved education and independent religious education were not addressed by the early leaders in education after 1947. Lest we be misunderstood, the intention is not to advocate one or the other, but to stimulate a discussion that helps us 'zoom out' and understand the influences that shape our collective failures and ultimately our successes, if there are to be any. This paper is also an attempt to draw attention to the lack of historical understanding in the literature pertaining to education in Pakistan.

Let us expound upon and clarify our concerns before proceeding further. We believe that the content and form of education in any particular society is shaped by discursive tensions. These tensions emanate from the belief systems and values held within particular

societies, and we can take their presence to mean that stakeholders with different values justifiably expect different things from the schools that educate their children. While some emphasize that the main aim of education is to maximize self-realization, opportunity, and social efficiency, others stress that education creates citizens that can meaningfully participate in the functioning of the political and civil society, and yet others that it produces individuals cognizant and observant of religious values. Each of these stakeholders supports a different kind of education. Education has thus been advocated to simultaneously respond to contradictory goals. That is to say, it aims to promote individual freedoms as well as produce governable populations, make progress as well as avoid disruption in the society and promote economic equality while sorting individuals to fit into different roles in an unequal society (Labaree, 1997). Thus, education has the potential to be both a progressive and conservative societal force.

Individuals and groups with different visions for society tend to envisage curriculum, instruction, and school management policies that suit their particular political aims. Education, therefore, is deeply political. Its very absence can also be interpreted as a political act that perpetuates particular configurations of power. The kind of education a state organizes for its population is supposed to represent the nature of the state. In the case of Pakistan, we have a complex mix of systems of education that represent a state characterized by competing ideas about the role of education. Understanding these tensions requires situating these systems in the context of historical events that have shaped the political

imagination of Pakistanis. We posit that education for citizenship versus religion has historically emerged as one of the central tensions which can help us understand the ways in which citizenship education diverged from religious education. Needless to say, attempts to conflate a *citizen* with a good *Muslim* remain as contested as the attempts to define a citizen apart from a religious being. We also note that, notwithstanding some recent efforts to regulate *madaris*, state educational policy has remained indifferent, almost oblivious, to them since independence. Thus there co-exist two kinds of schools: the state-run or private schools, which remain confused about the nature of the citizenship values they must inculcate and the *madaris* that do not look to produce citizens within the framework of a nation state.

The polar opposition between the *nation* and the *ummah*, a *citizen* and a *Muslim*, has appeared in a myriad of different forms in Pakistani institutions and politics. Let us 'zoom out' to the global educational developments of the nineteenth century in order to shed more light on the tensions between education for citizenship and religious education. Mass education has not always been an element of civilized human societies. It was the social, economic, and political developments in the Western world at the onset of so-called modernity that created the imperative to put everyone in schools. Thus, the nineteenth century witnessed the global emergence of mass education all over the Western world. In North America, Europe, and in the lands colonized by imperial powers, state involvement in education intensified during this time. The emergent public education systems, however, did not have the same purposes and manners of organization everywhere. The purpose of an education system in any given place was aligned with the particular political, cultural, and social climates in which it developed. In the emergent democratic states, the dominant rationale of public education was to nurture and preserve new political and social institutions. The un-schooled mind was seen as mischievous and detrimental to the health of state and society, with universal schooling regarded as the

instrument with which to discipline it.<sup>1</sup> Educating all, therefore, became central to the rhetoric of the modern state (Gross & Dynneson, 1991; Kennedy, 1997). Mass education, among its various other advantages, was a technology for producing a governable and productive population.

In colonized lands, the role of education was shaped by the exigencies of colonial rule. While in the emergent Western state systems, education was part of a historically specific project of modernity that involved radical shifts in the technique of governing large populations, in India and most of the colonized world, it was part of the project of subjugation and colonization. In the Western countries, education was founded on the basis of a political consensus, whereas in the colonized world, it was forced into existence as a consequence of military conquests. Laclau and Mouffe (2001), in their seminal reading of political movements, suggest that political resistance is created through exclusion. That is to say, the dominant discourse/powers are always haunted by what they exclude. The mainstream forms of education in both the modern and colonial state marginalized religious education, which subsequently haunted the former from outside.

The emergence of a specific system of *madaris* in the Sub-continent was based on a different set of aspirations than the education system promoted by the colonial state. Its founders perceived 'the English education' system as a threat to the religious values of Islam and conceived their educational enterprises primarily as an attempt to counter it. This rationale reverberates through the introduction to Dar-ul-Uloom Deoband. Its website states:

It is obvious that this [English education] scheme of the Company was a very noxious and deadly weapon for the Muslims' religious life, communal traditions and arts and sciences that they could never bring themselves round to accepting under any circumstance. Alienation

from religion was increasing daily; the consciousness of their own strength and position was dying out. The *padres'* preaching activities had made conditions more perplexing and the time was not far off when the old generation of the *ulema* educated in the former seminaries would have gradually vanished. These were the circumstances under which our thinkers and savants had to perceive that with political decay and debacle and deprivation of sovereignty, the Muslims' learning, religion and communal life too would soon fall into serious jeopardy.<sup>2</sup>

State support usually also involves its intervention in the matters of curriculum and instruction. Dar-ul-Uloom, being founded on donations from the community, did not rely on state support and, therefore, also kept it from intervening. Its founder proposed that Dar-ul-Uloom and other religious *madaris* “should be run trusting in Allah and with public contributions for which the poor masses alone should be relied upon.”<sup>3</sup> So the ideal of Dar-ul-Uloom, and if we may hypothesize, of most religious education institutions being formed in the late nineteenth century in India, was to preserve the religious discourses threatened and marginalized by colonial education and, therefore, by implication also provide a well-spring of resistance against education promoted by the British (Anzar, 2005; Ara, 2004). Dar-ul-Uloom Deoband and other major *madrassa* systems such as the Bareilvi *madaris* founded by Ahmad Raza Khan Bareilvi (1856-1921) emerged around the same time as the Department of Public Instruction (DPI) in India. Apart from *madaris*, there were also some education movements within the Indian Muslim communities, which aimed at creating a system of institutions favorable to Western educational thought—for example, the Aligarh Movement led by Sir Syed Ahmad Khan (1817-1898). However, the Aligarh Movement was not concerned with mass education and did not attempt to multiply itself. Meanwhile, *madaris*, spawned from the Deobandi and Bareilvi movements

had already morphed into different forms and denominations, and continued to operate outside of the mainstream.

As such, then, Pakistan inherited a mix of educational systems including the DPI, a progeny of its ailing colonial counterpart, a largely independent and varied system of *madaris*, and a sprinkling of private and not-for-profit educational institutions. In addition to an inadequate education infrastructure, the early thinking on education also betrayed attempts to portray western political discourses as imperfect but largely consistent with Islamic principles. The task of education, as Fazlur Rehman said in his address to the 1947 Education Conference, was “no less than building up of a modern democratic state whose citizens are equipped by the requisite training of body, mind, and character to live the good life” (Government of Pakistan, 1947). Pakistani citizenship, like citizenship in most modern nation states, was also conceived as distinct from parochial identities. As he put it, “(t)here cannot be a greater source of pride and a better object of undivided loyalty than the citizenship of Pakistan, no matter what political, religious or provincial label one may possess” (Government of Pakistan, 1947). This rhetoric becomes complicated when the task of building a modern democratic state refers to a sanction from Islam: “(t)his calls for a supreme act of dedication for which I can think of no higher sanction than that of Islam. . . It is this vision which was transformed into reality by the followers of Islam in its early days that the materialistic civilization of the West is at last directing its eyes. . . And it is for [aretoring] this vision... once again that Pakistan stands” (Government of Pakistan, 1947). Thus, the task of building a modern democratic state was also seen as a return to the values of Islam. Education was to simultaneously “instill into the young mind the fundamental maxim of democracy” while simultaneously seeking to locate these values in Islam: “Where but in Islam could we find the democratic virtues. . . and what better ideals could we postulate for our educational theory than these.” We argue that these attempts to assign to education the task of developing

citizens for a modern democratic state and to appeal to religion to achieve this were representations of the unresolved tensions that this article is concerned with. The state struggled to co-opt both modernity and religion but this dialectic remained unresolved. The conjoining of Islam and modernity in the policy rhetoric did not lead to the mainstreaming of *madaris*, but ultimately to controversial attempts to situate religious discourses within the mainstream curricula. While the state validated its emphasis on democracy and modernity with reference to Islam, a *madrassa* education had no need for such validation. The latter made use of modern forms of organization and administration, without letting the state intervene in its curriculum and instructional practices (Metcalf, 1983; 2010).

The present trials and tribulations of the Pakistani education system cannot be understood without fully coming to terms with the fundamental splits in Pakistan's polity, which antecedents are mentioned above. The available literature on education largely consists of snapshots of its present state. In fact, we can divide the existing literature on education in Pakistan into three main types with respect to its disciplinary sources. The first body draws from economics of education and has mostly addressed questions that lend themselves to comparative analysis and rates of return to different levels and types of education and effectiveness of public sector spending. A second body of work focuses on the schools that are themselves responsible for imparting education; this work largely focuses on the issues of teaching and learning in the classroom, as well as the issues of curriculum and assessment. The third type of work consists of reports from national and international organizations, which regularly provide us with damning evidence regarding ways in which the state is failing to meet its educational obligations.

While the various disciplinary approaches 'zoom in' on separate aspects of education, what is also required is a 'zooming out' that reveals and opens up conversation on the deeply rooted tensions that have been shaping

the educational opportunities available in Pakistan since its inception. For instance, given the geo-political situation of the country, there has been some interest amongst scholars, over the last decade, on issues of curriculum and *madrassa* reform. But a lot of this literature is motivated by concerns about extremism, terrorism and intolerance. This body of literature 'zooms in' on the 'problem' of the *madrassa* and the need to reform its curriculum and teaching practices. While the literature, sometimes poignantly, points out flaws in the above, it fails to situate the debate in its proper historical context to understand and seek ways of resolving the perennial tensions between mutually exclusive discourses that populate Pakistan's educational imagination.

*Irfan Muzaffar is an independent educational researcher and a Visiting Fellow at Development Policy Research Centre (DPRC). He can be reached at irfan.muzaffar@lums.edu.pk.*

*Faisal Bari is an Associate Professor of Economics at LUMS (currently on leave) and a Senior Advisor at Open Society Foundation. He can be reached at fbari@sorosny.org.*

## References and further reading

- Anzar, U. (2005). Islamic education: A brief history of *madrassas* with comments on curricula and current pedagogical practices. Draft Paper.
- Ara, A. (2004). *Madrasas* and making of Muslim identity in India. *Economic and Political Weekly*, 39(1), 34-38.
- Government of Pakistan (1947). *Proceedings of The Pakistan Educational Conference, Karachi*. Government of Pakistan, Ministry of Interior.
- Gross, R., & Dynneson, T. (1991). *Social science perspectives on citizenship education*. New York: Teachers College Press.

Kennedy, K. (1997). *Citizenship, education and the modern state*. London: Falmer Press.

Labaree, D. (1997). Public goods, private goods: The American struggle over educational goals. *American Educational Research Journal*, 34(1), 39.

Laclau, E., & Mouffe, C. (2001). *Hegemony and socialist strategy: Towards a radical democratic politics*. London: Verso Books.

Mann, H. (1855). *Lectures on education*: WB Fowle.

Metcalf, B. (1983). *Islamic revival in British India: Deoband, 1860-1900*. Princeton: Princeton University Press.

Metcalf, B. (2010). The *madrasa* at Deoband: A model for religious education in modern India. In S. Lyon & I. R. Edgar (Eds.), *Shaping a nation* (pp. 30-53). Karachi: Oxford University Press.

## Notes

<sup>1</sup> See for example Mann, 1855.

<sup>2</sup> [http://www.darululoom-deoband.com/english/aboutdarululoom/prev\\_religion.htm](http://www.darululoom-deoband.com/english/aboutdarululoom/prev_religion.htm)

<sup>3</sup> <http://www.darululoom-deoband.com/english/aboutdarululoom/introduction.htm>

## Class, Caste and *Marla* Housing Scheme in Rural Punjab

By Haris Gazdar and Hussain Bux Mallah



### Class and caste in Punjab

Even if the class-caste conjunction is not as important a determinant of marginalisation in Pakistan as it was in pre-independence India, there are large regions of the country where it is almost a defining characteristic of social structure. The contrast, however, with post-independence India, where the class-caste conjunction is instrumental to the design and architecture of virtually all social policy and development interventions, could not be more vivid. The divergent ideological trajectories of their respective independence movements, political parties and elites who dominated the process of decolonisation may be responsible for this difference. The myth of Pakistan's origin makes much of an assertion of a uniform and egalitarian Muslim identity united in opposition to a caste-ridden Hindu society (Jalal, 1995).

Ethnographic studies show that the class-caste conjunction is alive and active across central Punjab. Perhaps the only policy intervention in this region that directly addressed the oppression of citizens at the bottom of the class-caste hierarchy was the Punjab *Marla* Scheme—a little acknowledged and short-lived housing programme of the provincial government in the 1970s. The *Marla* Scheme left a deep, if uneven, imprint on the ground, but hardly any paper-trail. We report findings of a field-based study in Okara to highlight both the persistence of the class-caste conjunction and the impact of this scheme.

### Punjab caste demography

In order to appreciate the demographic significance of the class-caste conjunction, we refer to pre-independence population census data, in which caste was reported. Table 1 summarizes the caste composition of that part of the population of western Punjab that is thought to have remained in Pakistan. Muslim 'cultivator castes', including *Jats*, *Rajputs* and *Arains* accounted for around two-fifths of the total population. Not all of these were landowners. In fact, according to the same census, over a third of all cultivators were actually landless tenants.

**Table 1: Population distribution by caste**

	Present-day Punjab (%)	Montgomery including present-day Okara (%)
<i>Chubra</i> —all religions	1.3	1.6
<i>Mussalli</i>	3.3	5.5
Muslim <i>kammi</i>	20.6	21.3
Muslim cultivator castes	42.8	41
Others	32	30.5

Source: Authors' calculation based on Census of Punjab, 1931 (Khan, 1992)

The census classification of society into castes, particularly cultivators and non-cultivators, was buttressed by legal provisions instituted in the early part of the twentieth century. The Punjab Land Alienation Act divided rural society into 'cultivating' and 'non-cultivating' tribes for the purposes of restricting property transactions which might lead to the 'alienation' of land to non-cultivators. The institutional basis for operating this division was the 'village record' which was then, and remains today, the authentic record of property rights in rural Punjab.

The Muslim *kammis* or non-cultivator service groups

such as barbers, potters, blacksmiths, weavers and beggars comprised a fifth of the total population. A further five percent or so were recorded as *chubra* and *mussalli*, whose traditional caste occupation was described as 'sweeping'. While all three are regarded as pejorative terms now, they were used in a matter-of-fact way to describe the caste composition of the population in the 1931 census. Besides being engaged in their traditional menial and service occupations, the populations belonging to these three 'lower' caste groupings were predominantly employed as agricultural labourers who were, nevertheless, not to be counted among officially recognised 'cultivator castes'.

The traditional village record requires identification of individuals by paternity and caste, through a genealogical tree traced through the male line. The most privileged form of property right in the village is the ownership of cultivated land and corresponding shares in the uncultivated area, including the inhabited part of the village. Individuals with such rights are often referred to as the 'original owners'. Below them are those who may own cultivated land, but do not enjoy rights in the uncultivated area. There is, in addition, a category of non-owner tenants who are officially recognised as cultivators. The common feature across these villages is the maintenance of a hierarchy where genealogical lineage with the additional filter of 'cultivator' caste is invoked on a regular basis for all transactions.

### **Post-independence policy**

While independent India recognised the problem of caste-based oppression in its Constitution, in Pakistan the early debate on land reforms offered the first opportunity for addressing the class-caste conjunction that was embedded in the formal institutions of the village. The Punjab Land Alienation Act which formally divided rural society into 'cultivators' and 'non-cultivators', and in turn ensured the perpetuation of the traditional hierarchy, was repealed in Indian Punjab in the 1950s on the grounds that it was in conflict with the country's

newly adopted Constitution. The same law, however, remains in place in Pakistani Punjab, and land allotment rules in the province continue to exclude non-cultivators, including agricultural labourers, from the allotment of state-owned or acquired agricultural area. The social classifications defined in the village record remain a part of other citizen interactions with the state. Despite many high-profile reforms of the education system, the enrolment forms for government schools in Punjab require a child's caste as well as her father's 'cultivator' status in an ironic throw-back to the hierarchy formalised under colonial rule.

The then-ruling Muslim League appointed a committee to review the agrarian situation and to make recommendations for reforms. The main recommendations of this committee dealt with the conditions of tenant farmers and advocated the model of a peasant-proprietor economy. The committee also recognised that the oppression of non-cultivator service castes and agricultural labourers was far more severe than that of the landless tenants, but limited its recommendations for these classes to an extension of residential security, regulation of wages and working conditions in conjunction with other forms of protection. The provincial legislature of Punjab accepted most of the Muslim League committee's recommendations with respect to tenant cultivators when it passed a tenancy law in 1950. For the labouring service castes, the main contribution of the land reforms was to change their nomenclature from *kammis* to *mueen*. Even the relatively modest ideas about the provision of residential autonomy and security from village landowners were ignored (Naqvi, Khan & Chaudhry, 1987).

### **Punjab Marla Scheme**

It took nearly three decades and the formation of the first democratically-elected government in the 1970s before some of the recommendations of the early Muslim League committee were finally implemented. The Punjab Housing Facilities for Non-Proprietors in Rural Areas

Act, or the Punjab *Marla* Scheme in common parlance, was passed by the Punjab provincial assembly in 1975 (Punjab Government, 1975). The law initiated a programme for the allotment of property rights to 'non-proprietors' for homesteads measuring five *marla*, or just over 150 square yards, in Punjab villages. 'Non-proprietors' comprised those individuals or families who did not own any type of land anywhere in the country. In effect, this was meant to specifically target people belonging to the non-cultivator service castes and agricultural labourers.

The *Marla* Scheme law required the setting up of People's Village Committees (PVCs) to oversee the implementation of the programme. The PVCs, which were mostly made up of ruling party members, were to identify potential beneficiaries who were awarded lease titles to their plots of land. *Marla* Scheme settlements often came to be known as Bhutto colonies. The involvement of the PVCs had ensured that allotments were made to families at the lower end of the class-caste hierarchy—namely Christian *maseehi* and Muslim *shaikh* landless labourers who had been identified in the 1931 Census as *chubra* and *mussalli* respectively.

With the overthrow of the Bhutto government in 1977 the *Marla* Scheme fell into dormancy. In 1985 when the military regime decided to initiate a transfer of power to a civilian administration, the transitional government repealed the original 1975 Act and launched a new scheme called the Jinnah *Abadis* for non-proprietors, in the Rural Areas Act of 1986 (Government of Punjab, 1986). The main difference between this law and its earlier counterpart was the abolition of the PVC in favour of implementation through the land administration machinery. There were complaints that the revised scheme was being used to allot land to existing landowners or to legitimise illegal land-grabs of state-owned area by local elites.

The *Marla* Scheme remains very poorly documented. The record of implementation and beneficiaries is

available only at the local level, and there too in an *ad hoc* manner. Since the revised *Marla* Scheme under the 1986 law remains on the books at least nominally, it was reasonable to expect its documentation by the provincial government. The Office for Land Colonisation within the provincial Land Revenue department was responsible for running the scheme, maintaining records and acting as an intermediary between the provincial-level and district-level land administration. That the Jinnah *Abadis* scheme annually received around PKR two million in the provincial budget in the last three years, confirms its role in government as not much more than that of an occasional forwarding agency (Government of Punjab, 2009).

### Evidence from Okara

*Chak* 003 is a canal colony village located 17km from the Okara district headquarters. It was developed between 1920 and 1928 during British rule at the time of the excavation of the Lower Bari Doab Canal. The history of settlement in *Chak* 003 was not dissimilar to that of other canal colony villages in central Punjab. In *Chak* 003 the two major 'cultivator' clans who were allotted canal colony lands were the *Rajputs* and the *Jats*. Other landowners including *Arain*, *Bhatti* and a number of different *Jat* clans also came and settled in the village over time. Those belonging to recognised cultivator castes or tribes purchased land from the *Rajput* and *Jat* landowners. At present it is estimated that *Chak* 003 has over 1,300 households. The most numerous groups among the non-cultivator castes consist of *maseehis* and Muslim *shaikhs*, nearly all of whom work as casual labourers, farm labourers, or domestic servants.

Canal colony settlement followed a prescribed pattern for the establishment of village inhabitations. In *Chak* 003, as in other such villages, the primary residential quarter was a square-shaped village with broad dividing streets lined with individual plots. These were originally allotted to settlers roughly in proportion to their holdings

of agricultural land. The management of the inhabited area was counted among the tasks of the *lambardar*. Non-owning tenant cultivators were also accommodated in the main village settlement. Some of the fringes of the main inhabited area were set aside as *kammi abata*, the quarters of the service caste non-cultivators.

The original canal colony village is currently only one of six distinct settlements within *Chak* 003, accounting for around a quarter of the total population of the *mauza*. It is still the central location in terms of economic activity and infrastructure. Most of the powerful village owners as well as the latter-day landowners reside in the original settlement. Even so, the cultivator castes make up barely half of the population of this settlement. The bulk of the population belongs to the service castes, many of whom live in congested conditions in the traditional *kammi abata*. Nearly three-quarters of the population of *Chak* 003 reside in settlements outside the original settlement. Five new settlements have emerged since the first settlement, and there are over 80 farmhouses around the *mauza* with a combined population of around 400 households. All of these farmhouses are on privately owned agricultural land.

The most dramatic change in terms of housing in *Chak* 003 occurred in the early 1970s with the introduction of the *Marla* Scheme. Known locally as the Tilla Bhutto Scheme (TBS), this settlement is located one and a half kilometers away from the original settlement. Approximately 250 Muslim *shaikhs* and *maseehis* families were allotted five *marla* plots of land with title of ownership. A majority of the targeted beneficiaries were Muslim *shaikhs* and Christians who lived with their landlord employers, for whom they worked as farm and domestic labourers. The allottees of the TBS and their former employers recall the disruption caused to the landlords' economy by the sudden departure of their labourers.

The last 20 years had seen an increasing trend on the part of local landowners to establish farmhouses on

their agricultural holdings. There were over 80 farmhouses scattered across the 1800 acres of *Chak* 003. The farmhouses were set up to partly overcome the lack of space inside the original settlement, as the traditional landlord house in the village was supposed to accommodate livestock as well as farm and domestic servants, who were mostly from *maseehi* and Muslim *shaikh* families. After the loss of a majority of these families to TBS in the early 1970s, the landowners were able to acquire new farm and domestic servants from other villages.

Nearly all of the 400 or so residents of farmhouses are Muslim *shaikh*, and the remainder are *maseehi*. Men, women and children of these families are always at the beck and call of their employers. The salaries for male servants range between PKR 3000-4000 monthly. This works out to around half the amount that an employer would have to pay if he were to hire from the casual labour market. In addition to specific duties, many unspecified tasks are expected to be performed by family members without additional pay. Family members are not allowed to take up work with other employers. They can work for extra pay with the employer well below the going wage rate. While the daily wage rate is around PKR 250-300, family members of servants can expect to get only about PKR 100-120 a day from the landowner. Although contracts are only nominally for a year corresponding to the annual agricultural cycle, most farm servants and their dependents have been with the same employer for many years.

A loan or an advance is an essential part of this arrangement. The amount of the loan varies between PKR 30,000-70,000. In many cases parents of present-day workers were also indebted servants of the same landowner. The annual cycle of the employment contract simply means that a servant is free to negotiate with a new employer at the end of a crop cycle, but not in the middle of it. When landowners hire new servants they must compensate the previous employer for any outstanding debt, which then gets transferred to the

new employer. For newly hired workers, employers demand a personal guarantee from a trusted individual who can ensure that the servant will not abscond without repaying the debt. Landowners have strong networks across district and province, and indeed even beyond, and are able to eventually track down absconding servants.

Most of the farm servant families living on the farmhouses in *Chak* 003 had always been servants of landowners for as long as they could recall. Many of them were 'acquired' by *Chak* 003 landowners from other masters, with the neighbouring village of *Chak* 004 frequently mentioned as the place of origin. It was reported that the owners of that village had obstructed the establishment of a *Marla* Scheme settlement. In contrast to the farmhouse residents, nearly all inhabitants of the two *Marla* Scheme settlements in *Chak* 003 are either *maseebi* or Muslim *shaikh*. None of them own any agricultural land, and most work as casual labourers on local farms. None work as farm servants or bonded labourers anywhere.

### Conclusion

This article has shown that the class-caste conjunction remains active in at least some parts of contemporary rural Punjab. The region with its strong resource base, good connections with markets, and well-developed infrastructure also retains a traditional hierarchy in social and economic relations, which has survived significant political and economic changes. Successive reforms failed to address the resulting exclusions because they retained and even endorsed the key institutions such as the village record, genealogy, and a hierarchy of privileges.

The class-caste conjunction and the resulting social hierarchy become visible through an analysis of actual, traditional and contemporary arrangements concerning access to homestead land in certain developed villages of the region. At the lower end of the class-caste hierarchy are labourer castes whose traditional occupations are considered 'unclean'. The Punjab *Marla* Scheme, the

one intervention that sought to address the class-caste hierarchy, despite having a demonstrable impact, was put to rest prematurely, without any attempt at documentation or impact analysis.

A number of dimensions of vulnerability and social exclusion as measured along axes of asset ownership, gender, employment, health, region and ethnicity find explicit expression in public discourse, even if acknowledgement is not always backed with action. The non-acknowledgement of the class-caste conjunction in public discourse, however, is a major blind spot in the very framing of the debate on poverty, social protection and social policy in general. The more strident statements of Pakistani nationalism, particularly those which posit a supposedly egalitarian Muslim community in opposition to a hierarchical Hindu one, have simply provided alibis for the perpetuation of some of the worst forms of class-caste discrimination against large segments of the Pakistani citizenry.

*Haris Gazdar is a Director and Senior Researcher at the Collective for Social Science Research. He can be reached at gasbt@yahoo.com*

*Hussain Bux Mallab is a Research Officer at the Collective for Social Science Research. His email address is hussainnix@yahoo.com*

### References and further reading

Government of Punjab. (2009). *Annual Budget Statement for 2009-10*. Department of Finance, Lahore.

Government of Punjab. (1986). *The Punjab Jinnah Abadis for non-proprietors in Rural Areas Act 1986*.

Jalal, A. (1995). Conjuring Pakistan: History as official imagining. *International Journal of Middle East Studies*, 27, 73-89.

Khan, A. H. K. (1992). *Census of Punjab, 1931; Part II—*

*Tables* Lahore: Vanguard Books (Pvt.) Ltd., reprint.

Naqvi, N. H. S., Khan, M. H. , & Chaudhry, M. G. (1987).  
*Land Reforms in Pakistan: A historical perspective*.  
Islamabad: Pakistan Institute of Development Economics.

The Punjab Gazette: Dept. Provincial Assembly of the  
Punjab. *The Punjab housing facilities for non-  
proprietors in rural areas Act, 1975*

## Age at Marriage and Childbearing in Pakistan

By Ayesha Khan



### Introduction

Maternal health is a major concern for both government and the donor agencies in Pakistan. It is well-suited to be so, being relatively uncontroversial in political terms (who can argue that women should continue dying in childbirth?) and in terms of the gravity of the problem (276 deaths per 100,000 live births).<sup>1</sup> A great deal of money is being spent on programmes to reduce maternal morbidity and mortality<sup>2</sup>, out of which a fair amount is to be spent on conducting primary research to better inform policy-makers and other stakeholders on the matter. To that end, a recent study conducted by the Collective for Social Science Research<sup>3</sup> on induced abortion offers rich data and valuable insights regarding pregnancy-related health practices.

First, it is vital to remind stakeholders, in particular those in the government, that maternal health is essentially a reproductive health issue and not the other way around. The world has advanced far beyond thinking of female reproductive health as either a problem to be controlled through providing sufficient contraception or a medical problem for which adequate services related to delivery are all that is needed to lower the rate of complications during child-birth. Since the mid 1990s, when the United Nations held its landmark International Conference on Population and Development, the international discourse on reproductive health has become rights-based, to be

seen in the broader context of poverty and development which has a direct bearing (usually negative) on women's ability to exercise these rights. The Programme of Action resulting from the 1994 conference in Cairo states:

Reproductive rights . . . rest on the recognition of the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health. It also includes their right to make decisions concerning reproduction free of discrimination, coercion and violence, as expressed in human rights documents . . . . The promotion of the responsible exercise of these rights for all people should be the fundamental basis for government- and community-supported policies and programmes in the area of reproductive health, including family planning.<sup>4</sup>

Policies and programmes need to be assessed, therefore, in terms of how well they protect and nurture the full range of women's reproductive rights, and not in terms of improvement in specific indicators alone.

With this in mind, the Human Rights Council passed a Resolution on June 16, 2009 declaring maternal health a human rights issue, stating that:

. . .the unacceptably high global rate of preventable maternal mortality and morbidity is a health, development and human rights challenge, and that a human rights analysis . . . could contribute positively to the common goal of reducing this rate.<sup>5</sup>

At the eleventh hour, and in response to pleas from

reproductive health experts at home, Pakistan signed the Resolution. The momentum to take this approach further is slowly building. Most recently, the Balochistan Provincial Assembly passed a resolution calling upon the provincial government to implement the Human Rights Council Resolution and reduce mother and child mortality rates and the rate of pregnancy-related complications. It also appealed to the other provincial governments to do the same.<sup>6</sup>

### Induced Abortion Survey

Data from the Induced Abortion Survey (IAS), 2010 casts light on a range of issues that are directly related to pregnancy, particularly the sequence of events pertaining to the practice of induced abortion<sup>7</sup> and treatment for related complications. It is the first time that such detailed information about how, where, and why women choose to terminate their pregnancies is available from Pakistan (Table 1). A sample of 477 ever-married women (ages 15-49) who had a history of induced abortion were interviewed in 27 communities spread over North and South Punjab, North and South Sindh, and North Balochistan. A control group of 222 women without a history of induced abortion was also sampled in each of the communities.<sup>8</sup> All respondents were queried about each pregnancy they had experienced thus creating a data set of 4,120 pregnancies.

Unsurprisingly, age is related to the likelihood of abortion. A younger age at marriage increases women's vulner-

ability in many ways: child-bearing under age 18 is considered high-risk because the body is not ready to bear a child and younger women enjoy less negotiating power in sexual and contraceptive matters. A high proportion of women, including the control group, were married early—over 25 percent were married by the age of 15 and another 35 percent by age 18. A total of 90 percent were married by age 22. In addition, the survey found that while 35 percent of women had been involved in some way in their marriage decision, a staggering 54 percent of marriages were decided without the bride or her mother's inclusion in the decision. The types of marriage arrangements themselves are further evidence of the ways in which women's rights are violated. At the minimum, 15 percent were coerced into marriage by either a use of force or through *watta satta* (exchange marriage).<sup>9</sup>

The proportion of women who had been consulted before marriage rises with age at marriage (Table 2). Almost all forced marriages involved women under the age of 18, as did more than half of all *watta satta* marriages. In particular, among marriages that took place under age 15, only 12 percent of girls were consulted. The proportion of girls/women who were consulted in the marriage decision increased steadily with age, such that over 50 percent of women who married above age 24 were either consulted or decided themselves. However, the figures for women who said they had taken the decision themselves hovered around ten percent among all age groups.

**Table 1: Induced Abortion Survey—Women and pregnancies**

	Women	Pregnancies	Induced abortions	Pregnancies per woman	Induced abortions per woman
Abortion sample	477	2,918	611	6.1	1.3
Control group	222	1,202	--	5.4	--
Total	699	4,120	611	5.9	--

Source: IAS 2010, Collective for Social Science Research

Marriages in which male relatives were the primary decision-makers were fairly evenly distributed among all age groups, except that the oldest age group had the lowest level of male and maternal involvement at 32.7 and two percent respectively. Mothers' input in the marriage of their daughters averaged around ten percent over all age groups. As expected, women's agency in the decision to marry slightly increases the rate of unwanted pregnancies. However there is no linear association with use of contraception; nonetheless, the two lowest proportions of contraception (15.6 and 12.2 percent) are linked with the least agency in marriage decision: forced and *watta satta* marriages.

Thirty-two percent of all women did not intend to use contraception in the future, mainly due to reasons such as opposition from the husband, desire for more children, and fear of side effects. The implication therefore, is that women's right to decide freely on matters concerning

their fertility is curtailed in some part by disagreement between the married couple and also because women do not necessarily have accurate information about contraception to mitigate their fear of side-effects.

Almost all first pregnancies were declared as wanted. An examination of the pregnancy data shows that one-fifth of them were declared to be unwanted, e.g. they were either wanted later or not at all (Table 3). Both the age of women and the number of prior pregnancies increased the likelihood that a given pregnancy was unwanted. Having more male children further increased that likelihood. Furthermore, over half of all first pregnancies took place when the respondents were 18 or younger. This finding alone is a cause for concern considering the health implications for mothers giving birth at that age. By the age of 24, over 90 percent of women had been pregnant once, which means that 94 percent of first pregnancies had taken place.

**Table 2: Age at marriage and agency in marriage decision**

Age at marriage (years)	Agency in marriage decision (as % of women in age-bracket)						Total # of women in each age bracket
	Forced	<i>Watta Satta</i>	Males decided	Mother included in decision	Consulted	Decided	
< 15	4.5	20.0	44.5	10.9	11.8	8.2	110
15	1.2	22.0	39.0	14.6	19.5	3.7	82
16-17	2.9	14.7	37.5	11.0	25.7	8.1	136
18-19	1.2	11.2	37.3	8.7	26.1	15.5	161
20-21	0.9	5.5	44.0	11.9	27.5	10.1	110
22-23		8.2	36.7	12.2	34.7	8.2	49
> 24		8.2	32.7	2.0	46.9	10.2	49
Don't know			100.0				1
Total # of women in each marriage category	13	92	275	74	176	68	698

Except the numbers in the last row and the last column, each cell in the above table contains percentage of row total. Thus, the percentage of 15-year old brides who were forced into marriage is 1.2 percent of the total number of sample women who were married at that age.

Source: IAS 2010, Collective for Social Science Research

**Table 3: Pregnancy and whether it was wanted**

	Number	Percentage
Wanted child then	3,271	79.4
Wanted child later	521	12.6
Did not want child	328	8.0
Number of pregnancies	4,120	100

Source: IAS 2010, Collective for Social Science Research

Women's agency, as indicated by her role in the decision to marry, slightly increases the rate of unwanted pregnancies. However there was no linear association with use of contraception. The overall contraceptive use figure was 20 percent of all women sampled. The two lowest proportions of women using contraception (by agency in marriage) were 15.6 percent of women in forced marriages and 12.2 percent of women who had *watta satta* marriages. However, the highest proportion, 23 percent, was among women whose male relatives had decided their marriage, and the number dropped again among women who had been consulted/decided their marriages on their own.

Pregnancies among older women were more likely to end in induced abortion than those among younger women (Table 4). Out of 959 pregnancies recorded among women aged 19 or younger, only 5.7 percent were terminated by induced abortion, whereas for women in

the 25-29 age bracket, the proportion jumps to 17.8 percent. Other factors also played a role in women's fertility and marriage practices. For example, women with higher levels of education, in particular, secondary education, were more likely to have induced abortions than less educated women. It must be noted however that women who were more mobile were less likely to have induced abortions, suggesting that linkages between a woman's improved agency (i.e. higher mobility or education) are not always clearly linked with induced abortions. On the other hand, women in the lower wealth quintiles were more likely to have induced abortions.

Deaths and morbidities associated with unsafe induced abortions is a major health issue at the global level. Nationally representative figures from the Pakistan Demographic and Health Survey (2006-7) on the direct causes of maternal deaths cite abortion-related causes

**Table 4: Induced abortion cases by age at pregnancy**

Age at pregnancy (years)	Percent of pregnancies terminated by induced abortion	Total number of pregnancies in sample
Up to 19	5.7	959
20 to 24	7.5	1,381
25 to 29	17.8	1,042
30 to 34	29.9	468
35 to 39	39.1	179
40 to 44	60.9	69
45 plus	76.2	21
All	14.8	4,119

Source: IAS 2010, Collective for Social Science Research

as 5.6 percent of the total (NIPS, 2008).<sup>10</sup> IAS found a 30 percent complication rate among women who had induced abortions. Just over 80 percent of women sampled sought treatment for post-abortion complications (PACs). A woman's agency in her marriage decision (and her mother's input) was strongly correlated to the decision to seek treatment for such complications. Household wealth was also positively associated as was the severity of the complication and its symptoms.

### Discussion

The IAS data has shown that violations of women's reproductive rights have taken place on many counts. Firstly, a high proportion of girls are getting married under age 18, when they are not sexually mature to bear children, thereby putting their lives and well-being at risk. Secondly, the younger the age at marriage the more likely it is that the contract is forced and non-consensual. Thirdly, over half of first pregnancies are among women who are either too young or have just reached (at 18) child-bearing age. At such an early age, women are not equipped physically or emotionally to raise a family. Fourthly, unwanted pregnancies are not necessarily indicative of lack of agency among women. Rather, as women's decision-making power increases with age, they are more likely to differentiate between wanted and unwanted pregnancies. Lastly, where women have had PACs, they are more likely to seek treatment if they exercised more agency in strategic life choices such as when and whom to marry.

These findings indicate that the sooner women can exercise their reproductive rights the better it is for their long-term health and well-being. That is, increased decision-making power and agency among women at the very beginning of their reproductive years is critical to respecting the reproductive rights and freedoms that the Government of Pakistan has committed to uphold internationally. Currently the minimum age at marriage for girls in Pakistan is 16 (or upon reaching puberty), whereas ironically, the minimum voting age is 18. Both

the Convention on the Rights of the Child (1990) and the Convention on the Elimination of Discrimination against Women (CEDAW) of 1979 specify that the minimum age for marriage should be 18. In this respect, a bill to amend the Child Marriage Restraint Act that proposed to raise the minimum age for marriage to 18 (regardless of gender) was tabled in the National Assembly in August 2009. This is consonant with Pakistan's international rights-based commitments.

Other countries too have taken similar steps. In Nepal, the Parliament has considered raising the legal age of marriage from 18 to 20, in an effort to improve maternal health. The country has managed to reduce its maternal mortality ratio by half over the last decade (from 415 to 229 per 100,000 live births), yet policy-makers believe that delaying first pregnancies by raising the minimum legal marriage age is a necessary step to reduce the maternal mortality ratio even further.<sup>11</sup>

A rights-based approach to reproductive health does not concern itself with indicators alone, but with the framework in which a society views the well-being of its people. It is for this reason that laws are so important for women's health. Delaying marriage for women can lead to higher agency and decision-making power at all the following stages of their reproductive lives.

*Ayesha Khan is a Senior Researcher at the Collective for Social Science Research in Karachi. She can be reached at ayesha.absan30@gmail.com.*

### References and further reading

Human Rights Commission. *Eleventh Session Agenda Item 3: Preventable maternal morbidity and mortality and human rights* A/HRC/11/L.16/Rev.1, p.2.

NIPS and Macro International. (2008). *Pakistan Demographic and Health Survey 2006-7*. Islamabad: National Institute of Population Studies.

United Nations International Conference on Population and Development, (1994). *Programme of Action of the International Conference on Population and Development*.

**Notes**

<sup>1</sup>NIPS and Macro International, 2008, p. 177.

<sup>2</sup> For example, the total cost of the federal Maternal Neonatal and Child Health (MNCH) programme is PKR 19,995 million, of which the Government share is PKR 12,405 million and the contribution of the DFID, United Kingdom is PKR 7,590 million, with an additional PKR 2,310 million for technical assistance, advocacy and research. Figures as of printing from Ministry of Health, Government of Pakistan; <http://202.83.164.26/wps/portal/Moh/>

<sup>3</sup> The study was funded by the David and Lucile Packard Foundation.

<sup>4</sup> United Nations International Conference on Population and Development, (1994).

<sup>5</sup> Human Rights Commission.

<sup>6</sup> Joint declaration No. 62, presented by Mir Shah Nawaz Khan Marri, Mir Amanullah Nautezai, Engr Basant Lal Gulshan and Dr. Ruqayya Saeed Hashmi in Quetta on 13 October, 2010.

<sup>7</sup> An abortion is defined as the expulsion from the uterus of the products of conception before the fetus is viable. An induced voluntary abortion is one that is brought on intentionally by medication or instrumentation. (Dorland's Medical Dictionary, 2007).

<sup>8</sup> This was a purposively selected sample and not nationally representative. For each community cluster site, 17 women with a history of induced abortion were interviewed, and another eight women without such a history were interviewed as part of the control group. Research sites were selected on the basis of effective community-based contacts who would identify the requisite number of women with a history of induced abortion.

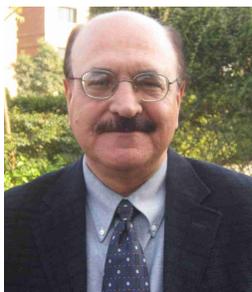
<sup>9</sup> *Watta satta* is a form of marriage in which brides are exchanged between two families.

<sup>10</sup> NIPS and Macro International, 2008, p. 180.

<sup>11</sup> See: <http://www.thehimalayantimes.com/fullNews.php?headline=Nepal+honoured+with+MDG+award&NewsID=258453&a=3>

## Industry Agglomeration and Spillovers in Pakistan's Manufacturing

By Abid A. Burki



A vast body of empirical literature from developed countries suggests that firms and workers are unevenly distributed across spatial units; they agglomerate in some regions more than others (Ellison & Glaser, 1997; Maurel & Sedilot, 1999; Alonso-Villar et al., 2004; Bertinelli & Decrop, 2005). However, little is known about the factors that drive the internal economic geography of developing countries and the course this inequality takes (Lall et al. 2004; Lall & Chakravorty, 2005). This paper examines the nature of spatial inequality and the causes behind the geographic concentration of large-scale manufacturing industries in Pakistan.<sup>1</sup>

### Spatial inequality in Pakistan

Geographic concentration of manufacturing industries is one of the most striking features of economic activity in developing and developed countries. Theoretically, firms like to concentrate in spatial units that offer access to large markets, better road networks and labor pooling (Krugman, 1991). Using districts as spatial units we find that large-scale manufacturing firms in Pakistan are unevenly distributed. They are mostly clustered in districts with large markets, high road density and labor market pooling.

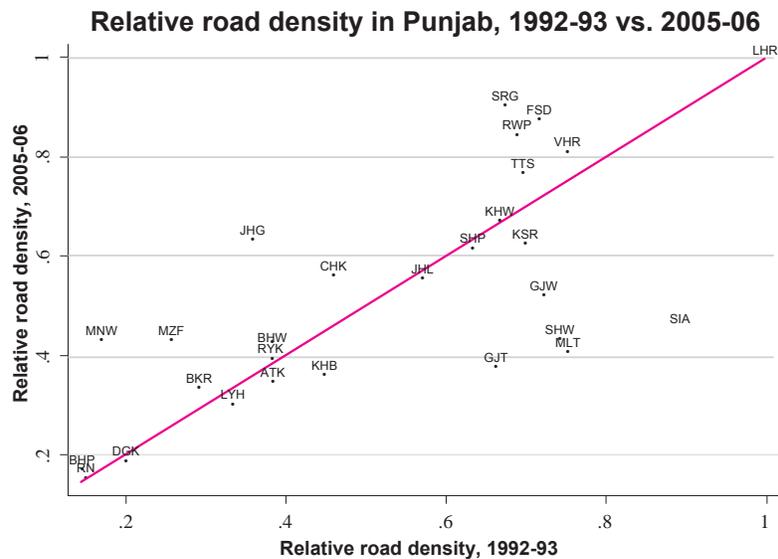
For example, a mapping of the district-level employment share of all industries using plant-level data from the

Census of Manufacturing Industries (CMI) indicates that highly concentrated districts are mostly clustered around the two metropolitan cities of Karachi and Lahore. Few exceptions are districts that offer a natural advantage in supply of raw materials, e.g., the Muzaffargarh and Multan districts, which have a large concentration of cotton ginning and textile manufacturing plants due to their location in the cotton growing belt of the country.

Similarly, access to the market is determined by the ease of connectivity with market centers in the spatial vicinity of a firm, which in turn depends on firm's distance from the market, size of the market and the availability of quality road and transport networks. Absence of all or some of these factors serves to limit the extent of the market for a firm because the firm would be unable to connect to a wider market area.<sup>2</sup> But spatial development of road infrastructure in Pakistan is not well documented. Our findings are that while spatial inequality in road density has been large, it has widely fluctuated over time. Figure 1 reveals that before the recent floods, districts in southern Punjab had the lowest road density, while districts in northern and central Punjab had the highest. This spatial disparity has continued to persist over the last two decades. For example, some southern districts, e.g., Rajanpur, D.G. Khan, Bhakkar, Layyah and Rahim Yar Khan that had a relative road density of less than 40 percent of Lahore in 1992-93 had experienced no change in the same by 2005-06. The analysis shows that a similar picture emerges from the other three provinces, where spatial inequality in road density remains large (Burki et al., 2010).

To create an indicator of labor market pooling, we gather data on education and skills endowment from each district. A multivariate statistical weighting approach known as the method of principal components (Greene, 1997) is applied to select those principal components

**Figure 1: Road density of Punjab districts relative to Lahore district**



that account for the largest variance and the selected principal components are then used to map measures of spatial concentration. The evidence suggests that districts with the highest principal component values for human capital endowments have the highest spatial concentration of manufacturing industry and that they are located in the northeast of the country and the Karachi district. That the spatial concentration of skilled workers is a potential source of urban increasing returns and agglomeration economies has long been highlighted by Marshall (1890), who noted that localized industry benefits from labor pooling by providing a constant market for skilled workers. We also find that districts located away from these urban demand centers (e.g., southern Punjab, interior of Sindh and remote districts of Khyber-Pakhtunkhwa and Balochistan) have extremely low educational endowments. Thus, labor market pooling may be an important source of industry agglomeration.

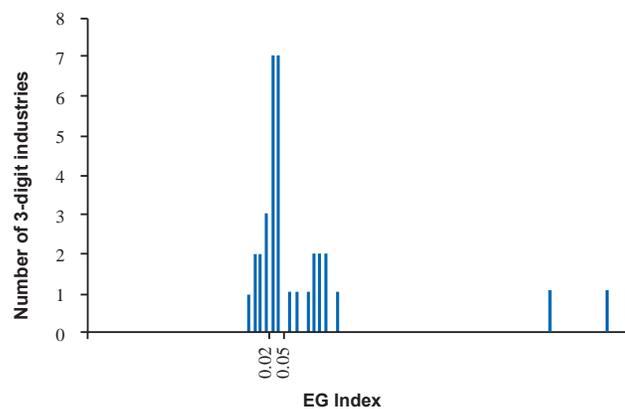
In sum, spatial inequality as measured by geographic concentration of firms, relative road density and human capital endowment is widespread in Pakistan. However, simple employment shares are not enough to capture the concentration of industry because that requires a

measure sensitive to the number of districts and the number of plants.

### Evidence on industry agglomeration

The method proposed by Ellison and Glaeser (henceforth, EG) (1997) allows us to measure agglomeration of industry based on a rigorous statistical model that takes random distribution of plants across spatial units as a threshold and compares it with the observed geographic distribution of plants. Most importantly, this index is sensitive to the number of districts and the number of plants. The value of the EG index indicates the strength of agglomeration externalities in an industry. Usually a score of more than 0.05 indicates a highly agglomerated industry; a score of between 0.05 and 0.02 suggests a moderately agglomerated industry; and a score of less than 0.02 shows a randomly dispersed industry.

Figure 2 plots the frequency distribution of the agglomeration index where the height of each bar indicates the number of industries for which the index is in that interval. The tallest bar is at the EG index value of 0.03 and 0.04, while a large number of industries

**Figure 2: Distribution of 3-digit agglomeration index**

are also in the range that corresponds to highly concentrated industries.

From the estimation results we find that agglomeration of PSIC 3-digit manufacturing industries<sup>3</sup> is widespread, whereas only a small proportion of industries fall in the category of low concentration industries. The results suggest that while 35 percent of the industries are highly agglomerated (EG index > 0.05) and 38 percent of the industries are moderately concentrated (EG index between 0.02 and 0.05), only about 27 percent of the industries are not agglomerated.

Turning to specific 3-digit industries in Table 1, we find that ‘Ship-breaking’ along with ‘Sports & athletic goods’ constitute the two most highly agglomerated industries. Here the driving force is their natural advantage of specialized labor, inter-industry spillovers, local transfer of knowledge and access to international supplier and buyer networks. Other concentrated industries represent sectors where it is critical for the industry to locate near final consumers or suppliers. On the other hand, the demand for least concentrated industries, e.g., ‘Iron & steel’, ‘Footwear’ and ‘Tobacco & rubber’, is diversified across many districts such that despite having substantial raw concentration as shown by the Herfindahl index, their employment is distributed across few large plants and agglomeration is subsequently low (Table 2).<sup>4</sup>

We also ask whether the most agglomerated industries in 2005-06 were also agglomerated in previous years. The evidence based on Punjab's data shows that the industry concentration falls dramatically between 1995-96 and 2005-06. While the mean value of the EG index remained roughly constant from 1995-96 to 2000-01, the index drastically falls by about 33 percent in the next five years. Increased entry of new firms in an industry explains this decline in concentration.

### Determinants of industry agglomeration

Existing literature suggests that the benefits of industry agglomeration are often associated with reduction in three types of transport costs, i.e., ‘moving goods’, ‘moving people’ and ‘moving ideas’ (or knowledge spillovers). We examine the factors that help explain the agglomeration of manufacturing industries in Pakistan. The empirical results based on OLS regressions tell quite a consistent story. Our findings are that the size of district level population, increase in road density, and increase in the pool of technically-trained workers all help promote agglomeration of manufacturing industries. The determinants of industry agglomeration not only highlight the reasons for dense economic activity across spatial units, but also the difficulties faced in attracting manufacturing activities to remote districts. However,

**Table 1: Most agglomerated 3-digit manufacturing industries in Pakistan, 2005-06**

Industry	No. of Plants	No. of Districts	Herfindahl index	Gini-coeff	Ellison-Glaeser index
Ship breaking	30	1	0.035	0.965	1.043
Sports and athletics goods	51	5	0.078	0.842	0.901
Furniture and fixtures	34	8	0.076	0.268	0.231
Scientific instruments	95	7	0.052	0.218	0.193
Pharmaceutical industry	213	22	0.017	0.171	0.171
Wearing apparel	236	12	0.025	0.164	0.156
Handicrafts and office supplies	43	12	0.048	0.177	0.151
Printing and publishing	43	5	0.176	0.271	0.141
Pottery and china products, etc.	97	7	0.058	0.175	0.139
Paper and paper products	131	22	0.117	0.210	0.124
Ginning and bailing of fibers	540	27	0.004	0.096	0.099
Electrical machinery	240	19	0.072	0.125	0.068

**Table 2: Least agglomerated 3-digit manufacturing industries in Pakistan, 2005-06**

Industry	No. of Plants	No. of Districts	Herfindahl index	Gini-coeff	Ellison-Glaeser index
Spinning and weaving of cotton & wool	1081	44	0.006	0.023	0.019
Footwear manufacturing	35	10	0.255	0.247	0.015
Wood and cork products	15	10	0.138	0.139	0.014
Industrial chemicals	111	21	0.028	0.029	0.003
Iron and steel industries	198	18	0.463	0.426	-0.005
Tobacco industry	13	6	0.232	0.207	-0.012
Beverage industry	36	16	0.105	0.080	-0.020
Rubber products	30	10	0.198	0.161	-0.030
Animal feed & ice factories	65	20	0.104	0.067	-0.035
Paper and paper products	131	22	0.117	0.210	0.124
Ginning and bailing of fibers	540	27	0.004	0.096	0.099
Electrical machinery	240	19	0.072	0.125	0.068

a range of policy instruments have already been tried in Pakistan, as well as in other developing countries, to overcome the latter, e.g., tax holidays, building infrastructure in industrial estates, free trade zones, export processing zones, etc. It goes without saying however, that there is no evidence regarding their

systematic success or failure from any country. Therefore, more empirical research needs to be conducted to evaluate the effectiveness of past policies so as to determine the circumstances in which these programs and policies are likely to succeed.

### **Within-industry versus inter-industry spillovers**

Intra-industry and inter-industry externalities are associated with local scale externalities arising from local information spillovers linked with input and output markets as well as local technological developments. If firms in a district learn from local firms in their own industry, there exist intra-industry or localization externalities; if firms learn from all firms in the district, it is termed as inter-industry or urbanization economies (Henderson et al., 2001). We use CMI data of Punjab for 1995-96, 2000-01 and 2005-06 to calculate these externalities for all the districts of Punjab.

We find that within-industry spillovers (or localization economies) have a greater magnitude in Pakistan than inter-industry spillovers (or urbanization economies). This shows that there is much less role for technological spillovers and inter-industry learning. By implication, policy-makers should be able to tackle spatial inequality by focusing on industry-specific subsidies or infrastructural investments. Industries that offer the highest local scale economies are also the most agglomerated industries across districts. Thus, higher magnitudes of within-industry externalities correspond well with inter-district agglomeration and concentration of industry, which is in line with expectations. Inter-industry externalities or urbanization economies are found only in the 'Basic metal & metal products' industry, where an increase in the urbanization index by one standard deviation increases productivity by 29 percent. These results seem to suggest that even though there is little role for inter-industry learning from technological spillovers, the 'Basic metal & metal products' industry would greatly benefit from increased inter-industry spillovers.

### **Patterns of industry agglomeration**

To understand the nature of scale economies and patterns of industry agglomeration, we estimate a value-added production function by taking the value-added output per production worker in each 2-digit industry. The explanatory variables include capital per worker

and shift factors, including variables for within-industry and inter-industry externalities (spillover effects) as well as employment in each district in the respective industries. We use three-year pooled CMI data from the Punjab province to estimate the model (using OLS) for each 2-digit industry at the district level by including a complete set of sub-industry, year and district fixed effects. Major findings are summarized below.

The impact of within-industry externalities is always statistically positive. The results predict that, holding all else as constant, a 10 percent increase in own industry employment increases the value-added output per worker by about four percent. At sample means, our estimates imply that local scale economies are present in all industries, but, within-industry spillovers are highest in 'Paper and paper products' and 'Other industry and handicrafts', followed by 'Textile and leather', and then 'Wood and wood products'.<sup>5</sup>

Based on the prevailing evidence in other countries, we expect that inter-industry spillovers are likely to be highest in industries that are regarded as high-tech and vice-versa. But, this effect, as mentioned earlier, is positive and statistically significant in only one industry, i.e., 'Basic Metal & Metal Products.'

Finally, the estimated results also show that the average share of capital in terms of value-added output is quite high at 43.2 percent in all industries, which is not far from the average share of 37 percent in the manufacturing sector in South Korea. Capital's share is highest in the textile and leather industries, followed by the 'Basic metal & metal products' and petrochemical industries. The lowest share of capital is in wood and wood products followed by mineral products. The most alarming finding is that from 1995 to 2005, productivity as measured by value-added output per production worker has stagnated in all large-scale manufacturing industries, except food, beverage and tobacco industry, where productivity has increased at 4.4 percent per annum. In all other industries, productivity growth has remained stagnant during this period.

*The author is a Professor of Economics at LUMS. He can be reached at burki@lums.edu.pk.*

### References and further reading

Alonso-Villar, O., Chamorro-Rivas J., & Gonzalez-Cerdeira, X. (2004). Agglomeration economies in manufacturing industries: The case of Spain. *Applied Economics*, 36, 2103-2116.

Bertinelli, L., & Decrop, J. (2005). Geographic agglomeration: Ellison and Glaeser's index applied to the case of Belgian manufacturing industries. *Regional Studies*, 39, 567-583.

Burki, A. A., Munir, K., Khan, M., Khan, U., Faheem, A., Khalid, A., & Hussain, S. T. (2010). Industrial policy, its spatial aspects and cluster development in Pakistan. Report commissioned for Ministry of Industries and Production, Government of Pakistan, Islamabad and the World Bank, Washington, D.C.

Ellison, G., & Glaeser, E. (1997). Geographic concentration in U.S. manufacturing industries: A dartboard approach. *Journal of Political Economy*, 105, 889-927.

Federal Bureau of Statistics. (2010). *Pakistan Standard Industrial Classification (All Economic Activities) PSIC Rev.4*. Islamabad: Statistics Division, Government of Pakistan.

Greene, W. H. (1997). *Econometric Analysis*. New Jersey: Prentice Hall International.

Henderson, J. V., Lee, T., & Lee, Y. J. (2001). Scale externalities in Korea. *Journal of Urban Economics*, 49, 479-504.  
Jacoby, H. G., & Minten, B. (2009). On measuring the benefits of lower transport costs. *Journal of Development Economics*, 89, 28-38.

Khandker, S. R., Bakht, Z., & Koolwal, G. B. (2009). The poverty impact of rural roads: Evidence from Bangladesh. *Economic Development and Cultural Change*, 57, 685-722.

Krugman, P. (1991). Increasing returns and economic geography. *Journal of Political Economy*, 99, 483-99.

Lall, S. V., & Chakravorty, S. (2005). Industrial location and spatial inequality: Theory and evidence from India. *Review of Development Economics*, 9, 47-68.

Lall, S. V., Shalizi, Z., & Deichmann, U. (2004). Agglomeration Economies and Productivity in Indian Industry. *Journal of Development Economics*, 73, 643-673.

Marshall, A. (1890). *Principles of Economics*. London: MacMillan.

Maurel, F., & Sedillot, B. (1999). A measure of the geographic concentration in French manufacturing industries. *Regional Science and Urban Economics*, 29, 575-604.

### Notes

<sup>1</sup> This paper draws from chapters 4 and 5 of Burki et al. (2010).

<sup>2</sup> Recent literature also suggests that improvements of roads at the regional level can significantly contribute to the pursuit of socially inclusive growth [see Khandker et al. (2009); Jacoby and Minten (2009)].

<sup>3</sup> The Pakistan Standard Industrial Classification (PSIC) refers to a hierarchical coding structure, generally using five levels, developed by the Federal Bureau of Statistics, Government of Pakistan to classify all economic activities in the country. Thus a 3-digit industry classification is narrower than a 2-digit classification, and comprises a set of economic activities represented by 4- and 5-digit categories. For further details, see FBS (2010).

<sup>4</sup> While the EG index gives proper weights to correct for diverse sizes of plants, the Herfindahl index only measures the industry's plant-level concentration of employment.

<sup>5</sup> It is possible that some industries are under-reporting contractual labor to bypass labor laws, which may be leading to over-stating of the magnitudes of localization economies.

## Research Notes

### **Development Policy Research Centre: Harnessing Knowledge for Change**

The Development Policy Research Centre (DPRC) at LUMS is envisaged as a knowledge centre structured around core socioeconomic development themes with the objectives of carrying out cutting edge multi-disciplinary research across the School of Humanities, Social Sciences and Law to inform evidence-based policy making and public discourse on important issues of our time.

The Centre builds on the advantage of being located at one of the best universities in Pakistan to set up a consolidated research platform for its world class faculty and to develop linkages with other academics and practitioners both home and abroad. Through the Centre, the School of Humanities, Social Sciences and Law (SHSSL) at LUMS aims to establish itself as an internationally recognized school of excellence due to the quality of its applied and theoretical research. The research program of the DPRC falls under the following seven themes:

#### **1. Poverty and Welfare**

##### **Theme Leaders: Ali Khan, Ali Qazilbash, Farooq Naseer**

Poverty is generally accepted as a multi-dimensional problem. Though usually defined in terms of inadequate income levels and lack of access to basic human needs, poverty has many other aspects, causes and consequences that often go unaddressed much to the detriment of remedial policymaking efforts. The poverty thematic group will tackle important research questions that uncover poverty dynamics in Pakistan, with a particular emphasis on the regional specificities underlying its causes and remedies. It is expected that research conducted under this topic will allow a comparative analysis of structural issues and anti-poverty programs across the region. Some research questions of interest under this theme are given below.

How effective are existing government mechanisms to

identify and help the poor, with particular reference to such schemes with nationwide coverage as the Benazir Income Support Program? What are the factors that lead to dynamic poverty traps at the micro (household) and macro (district) level? What is the role of education in eliminating chronic poverty—poverty that persists across generations and how does that role interact with labor market opportunities? How do informal institutions and social capital shape and constrain material well-being and how might they be used to improve the same? What are the implications of the above research questions for the design of various social protection programs?

#### **2. Prosperity and Social Justice**

##### **Theme Leaders: Antonio Marasco, Mohammad Waseem, Turab Hussain**

This research theme explores questions pertaining to the well-being of society. How do we ensure high, sustained economic growth that translates into prosperity for all? How do we ensure sustainability and inclusiveness of that growth? How do we avoid problems associated with unequal distribution across people and regions? What are the prospective sectors in the economy that can contribute to future growth and how can policymaking efforts ensure that they remain competitive? What are the respective roles of public and private sector in the economy? Why is revenue generation critical for economic growth and distribution? What has been the role of foreign direct investment in growth and what is its impact on overall equality? How effective have financial reforms been in improving the efficiency of the banking and finance sector in the country?

The theme would also encompass research exploring the political, sociological, historical and legal elements of societal well-being. What are the possibilities for creation of a regional human rights arrangement in South Asia? How do political and constitutional constraints contribute towards gender discrimination in the region? What are the political economy arrangements that impact capital accumulation in Pakistan?

### 3. Regionalism and Globalization

#### Theme Leaders: Ejaz Akram, Shaharyar Khan

Given today's increasingly integrated global economy, the importance of weighing in on the causes, incidences and consequences of regional integration and globalization cannot be over-emphasized. Though they have been the subject of academic and policy debate for decades, there is a dire need to re-examine these issues in light of the globally significant political and economic developments in recent times.

Research under this theme will explore questions of trade, migration, security, economic cooperation and global politics, among others. What are the possibilities for vertical and horizontal foreign direct investment in South Asia? What benefits could accrue from having supply chains across the region? What is the scope of organizations like the South Asia Free Trade Area in terms of improving the regional socioeconomic conditions? What is the impact of fluctuations in remittances on developing economies with large diasporas? From a political science perspective, how does one understand the reaction of Muslim countries like Pakistan to the process of globalization? In what ways have the sociological foundations of societies in the region been altered by the deteriorating security situation? What are the respective internal political contradictions that prevent the normalization of relations between India and Pakistan?

### 4. Accountability, Institutional Capability and Governance

#### Theme Leaders: Livia Holden, Raza Ahmad

Pakistan's historic development experience has been prone to boom and bust growth cycles. However, the episodes of high growth and increased financial inflows have not been paralleled by improvements in human capital formation; better health outcomes for the

citizenry; improvements in access and efficiency of justice; and improvements in law and order. Recent developments in growth literature suggest that these factors are essential pre-requisites of long-term growth and sustainable poverty reduction. The irony is that in spite of the implementation of many well-funded multilateral and bilateral programs to improve social sector outcomes and access to justice, the state has been unable to improve these fundamental structural pre-requisites of growth and poverty reduction.

Pakistan's development experience suggests that much more than paucity of funds is needed to explain state failure to improve these structural factors. Increasingly, there is recognition that a large part of the answer of poor delivery of these services lies in governance and institutional failures. Designing governance mechanisms and institutions to deliver better social sector outcomes, justice and law and order is as, if not much more, important as increasing expenditure for the improvement of these outcomes.

### 5. The Environment and Natural Resources

#### Theme Leader: Rafay Alam

As the world gradually wakes up to the reality of climate change, the challenges for the developing world and South Asia, in particular, are especially grave. The wide ranging and complex environmental issues facing the region could have serious potential implications for sustainable future growth, availability of essential resources, health, poverty, political stability and security. We attempt to encompass research aimed at addressing these critically important concerns. How can sustainable and equitable growth be maintained while ensuring the preservation of the region's natural resources? How can water-management systems in the country be optimized to guarantee agricultural and industrial productivity in the long run? How will impending water shortages affect political stability and security in South Asia, especially between India and Pakistan? What are the pre-emptive

measures that can be taken at the state-level to guard against natural disasters and their aftermath? What is the nature of ecological politics and what is its relationship to and incorporation within wider political thought and praxis? How do we formulate notions of water and land rights and how can those formulations be used to ensure greater environmental sustainability?

## 6. Culture, Heritage and Policy

### Theme Leader: Nomanul Haq

In the increasingly interdependent world we live in, culture constitutes an important area of contestation for national, religious and ethnic values, especially in areas of the developing world. Recurrently, there have been perceptions of conflict between indigenous value systems and those of the modern world, with often disastrous consequences. A considerable number of policy failures in the developing world have been attributed to an incognizance of socio-cultural nuances during the policymaking process, due, in no small way, to the lack of academic investigation of the often perplexing nature of culture. It is also observable that service delivery systems in the developing world that comprise policies apprised of cultural context, such as the Grameen Bank in Bangladesh, are considerably effective in their application.

The theme of culture, heritage and policy encompasses the subtle but pervasive cultural aspects of the design, construction, articulation and implementation of policy. What are the cultural mores that constrain human behavior in developing countries? How do people take it upon themselves to collectively articulate their identities? How do questions of identity formation impact the development of certain social groups? To what extent do indigenous cultural institutions affect the development trajectories of societies, groups, regions and countries? How does the process of economic development impact and shape perceptions of culture in developing societies?

The proposed research under this theme would be geared towards removing the real and perceived conflicts between the makers and recipients of policy, through the inclusion of cultural discourse in the policymaking process.

## 7. Democracy, Social Movements and Civil Society

### Theme Leaders: Rasul Bakhsh Rais, Junaid Ahmad

Post-colonial traditional societies have changed a great deal through state intervention, expansion of global capitalism and growth of modern sectors of the economy. But this change is neither uniform within these societies nor is it equal in depth and consequence across national boundaries, leaving a great deal of room for academic inquiry. Pakistan, for example, presents a complex patchwork of segmented modernity, traditional social structures, shaky democratic institutions, an authoritarian state apparatus and a gradually burgeoning civil society. We question Pakistan's failure to cross the threshold of democratic transition and the hold of tradition in Pakistani society in impeding democracy. What has been the role of civil society in Pakistan in the democratic process? What are the specific roles of state and society actors in solving Pakistan's many institutional crises? How have social movements in Pakistan, such as the recently concluded lawyers' movement, impacted its political development?

Generally, in policy and scholarly circles in Pakistan, the political culture, social structures and hierarchies of traditional leadership have failed to find a great deal of space. It is hoped that research under this theme will fill the deplorable vacuum of indigenous social scientific scholarship on the aforementioned issues in the country and contribute to the strengthening of democratic institutions and civil society. This will be attempted through engagement with the policymakers on domestic and foreign policy and the dissemination of research findings through publications, workshops, seminars and media partnerships.

## Revealing Facts

### I. Cost of Doing Business

Economic growth models posit savings as the key to growth. The success of these growth models is predicated, however, on one important assumption—savings are indeed invested in business. And that depends critically on the cost of doing business in an economy. If investment flows are dictated by project rate of return, why have some countries been so successful at attracting this investment? And more importantly, why have some countries failed to not only pull in investment, but also direct it to business activities? The table below presents some key markers of the ease of doing business in the South Asian region.

**Table 1: Cost of Doing Business—Regional Comparison (2010)**

Country	Time to start a business (# of days)	Cost of starting a business (% of income per capita)	Total tax rate (% of profit)	Cost to export (USD per container)	Recovery rate
Afghanistan	7	26.7	36.4	3,865	0.0
Bangladesh	19	33.3	35.0	985	25.8
Bhutan	46	7.2	40.6	1,352	0.0
India	29	56.5	63.3	1,055	16.3
Maldives	9	9.4	9.3	1,550	18.2
Nepal	31	46.6	38.2	1,960	24.5
Pakistan	29	10.7	31.6	611	36.5
Sri Lanka	35	5.4	64.7	715	47.0

N.B. *Cost to export* is calculated as USD per 20-foot container; no bribes or tariffs included. The *recovery rate* after insolvency is recorded as cents on the dollar recovered by creditors through reorganization, liquidation or debt enforcement and (foreclosure) proceedings.

Source: *Cost of Doing Business* (2010). Available at <<http://www.doingbusiness.org>>

Although Pakistan scores above the regional average for corporate tax burden, recovery rate, start-up and export cost, its progress may well be overstated by not accounting for infrastructural bottlenecks and political instability. As a region, South Asia performed comparatively well in business start-up indicators ranking third in the world, but fared worst in terms of the ease of closing a business as measured by recovery rate.

**Table 2: Cost of Doing Business—Worldwide Comparison**

Country	Time taken to start a business (# of days)	Cost of starting a business (% of income per capita)	Total tax rate (% of profit)	Cost of export (USD per container)	Recovery rate
South Asia	24.5	24.5	39.9	1,511.6	21.0
East Asia and Pacific	39.0	27.1	35.4	889.8	28.6
East Europe and Central Asia	16.3	8.5	41.2	1,651.7	31.3
Latin America	43.6	35.9	53.5	1,310.6	30.4
Middle East and North Africa	20.0	38.0	32.8	1,048.9	29.4
Organization for Economic Co-operation and Development	5.6	5.3	43.0	1,058.7	69.1

Source: *Cost of Doing Business* (2010). Available at <<http://www.doingbusiness.org>>

## II. Human Development

While lowering business costs is an example of how an economy may reach the most efficient allocation of its scarce resources, it would be folly to associate economic growth with human development. After many false starts, it was realized by the mid-seventies that growth is a necessary but insufficient condition for development. With the ‘dethronement of GNP’ came the need to supplement economic measures of development with noneconomic social indicators.

**Table 1: Measuring Development—Regional Comparison (2010)**

Country	Maternal mortality rate (per 1000 births)	Under-five mortality rates (per 1000 live births)	Unemployment rates (% of total)	Life expectancy at birth (years)	GDP per capita (2008 PPP USD)
Afghanistan	1800	257	8.5	44.6	1419
Bangladesh	570	54	4.3	66.9	1458
Bhutan	540	81	3.2	66.8	5532
India	450	69	4.3	64.4	3354
Maldives	120	28	14.4	72.3	5721
Nepal	830	51	--	67.5	1189
Pakistan	320	89	5.1	67.2	2625
Sri Lanka	58	15	5.2	74.4	4999

Source: *United Nations Development Project* (2010). Available at <<http://hdr.undp.org/en/countries/>>

Relative to the world, the South Asian region has, as a whole, largely failed to deliver on its promise of bettering the availability of economic and social choices, access to essential goods and services, and indeed the standard of living for the majority of its people. Thus contextualized, that Pakistan has shown the least development over the past five years in a region of under-performers is alarming indeed.

**Table 2: Trends in Human Development Index (2005-2010)**

Country	2005	2006	2007	2008	2009	2010
Afghanistan	0.307	0.311	0.323	0.327	0.342	0.349
Bangladesh	0.432	0.441	0.449	0.457	0.463	0.469
India	0.482	0.491	0.500	0.506	0.512	0.519
Maldives	0.560	0.574	0.583	0.590	0.595	0.602
Nepal	0.400	0.406	0.411	0.417	0.423	0.428
Pakistan	0.468	0.471	0.481	0.484	0.487	0.490
Sri Lanka	0.635	0.640	0.646	0.650	0.653	0.658

N.B. The human development index (HDI) is a composite measure of longevity, knowledge and standard of living, ranging from 0-1, with 1 being the highest.

Source: *United Nations Development Project* (2010). Available at <<http://hdr.undp.org/en/countries/>>

## Guidelines for Authors

All submissions will be handled electronically and should be sent to *sspb@lums.edu.pk*. Submitted articles, not exceeding 3500 words in length, should preferably be in the form of plain text or as a word editor document. The Editorial board will review all submissions to determine their suitability for publication. Articles should not be simultaneously submitted for publication to another journal or newspaper. If a different version of the article has previously been published, please provide a copy of that version along with the submitted article. All correspondence, including notification of the editorial decision and requests for revision will take place by email. In case the author(s) do not respond in a timely manner, the Editors reserve the right to make final revisions before publication.

SOCIAL  
SCIENCE  
AND  
POLICY  
BULLETIN

Social Science and Policy Bulletin  
Lahore University of Management Sciences  
Opposite Sector 'U', D.H.A.,  
Lahore Cantt.54792, Pakistan  
Phone: 92-42-35608000  
Fax: 92-42-35894990 E-mail: [sspb@lums.edu.pk](mailto:sspb@lums.edu.pk)