Institutional Solutions to the Asymmetric Information Problem in Health and Development Services for the Poor[1]

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ABSTRACT

Most of the world's poorest people secure access to essential services by paying for them and thus are in a 'market,' whether the services are provided in the public or private sectors. Even the poorest are making payments through these markets. The parties to these transactions are unequal in the knowledge needed to make good decisions, however, with negative consequences for quality. These information asymmetry problems are particularly acute in undergoverned countries, where state regulation and direct service delivery are weak. In these settings it is particularly important to find locally appropriate institutions that will assist service users to use the market to stimulate quality as well as quantity from practitioners. Through a systematic review of literature reviews this article examines the evidence on solutions to these problems in a variety of professions serving the poor – in agriculture, education, veterinary medicine and especially health. – and finds that there are many commonalities in successful institutions between them. We conclude that direct payments by clients are more likely to have a positive effect on quality if they are deconcentrated to locally-managed organisations rather than to individual practitioners, particularly if those organisations have an institutionalised history of other–regarding values and incorporate client participation. The likelihood of social institutions that mitigate inequalities in knowledge about the quality of services increase with GNP per capita, education, good governance, and 'social capital' while they decrease with inequality and patronage. Because of societal variation in the prevalence of these attributes as well as cultural and political heritage, solutions to the asymmetric information problem generally are country specific.

This paper is based on a modified systematic review of surveys of the literatures on mechanisms and institutions of professional service delivery in four sectors of low and middle income countries.

Key Words: institutions, path dependency, health, veterinary, education, agricultural credit.

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1. INTRODUCTION

Over the last dozen years it has become a commonplace of development that institutions matter – that the institutional context within which social and economic assistance and interventions occur can make them successes or failures (Burnside & Dollar, 2000; Conning & Udry, 2007; North, 1990). Such institutions encompass formal and informal societal and organisational arrangements, incentives, rules, norms, and values that shape behaviour and coordinate cooperative interactions. Sometimes a mechanism, such as decentralisation, comes to be socially valued for its own sake. Such valuation is what makes it 'institutionalised' and frequently is essential in making the mechanism effective. Whether institutionalised or not, however, a better understanding of these coordinating mechanisms and their effectiveness in different contexts can provide important insights into how best to influence action in the public interest.

In this systematic review we address a subset of mechanisms and institutions governing professional health and development services in poorly-governed low and middle income countries. In most professional services the parties to a potential transaction are unequal in the knowledge needed to make a good decision. It is a well-established principle of economics that markets which suffer from such *asymmetric information* are imperfect, with the consequences of exposing the uninformed to potential exploitation, depressing the prices that purchasers are willing to pay for a service, and discouraging many transactions that would otherwise be desirable to sellers or buyers, with the typical consequence that service quality is reduced (Akerloff, 1970). Unless some institution or mechanism exists to assure or communicate quality, there is a high danger that the adequacy of the service provided will enter a downward spiral. The need for solutions to this 'asymmetric information' problem is common across human and veterinary medicine, education, and agricultural credit and we enhance our knowledge of what they might be by addressing them together.

Health markets pose a heightened version of the problems of asymmetric information. Patients rarely know precisely what is wrong with them or what should be done about it, and they rely on their health care providers, with their superior knowledge, to offer diagnoses and advice on the appropriate course of treatment. Where patients are not able to judge the quality of these inputs, competition can lead to a combination of exploitative 'rent-seeking' (i.e., revenue gouging) by unscrupulous providers and 'a race to the bottom' (also known as a 'market for lemons') in which prices are driven down at the expense of quality (Akerloff 1970; Arrow 1963, 1985). If purchasers could know the quality being offered, they could forego counterfeit, substandard and ineffective goods and services, while paying more for better quality ones, thereby providing stronger incentives for good performance. Good quality providers would also be advantaged by measures to overcome information asymmetries, as they would be able to better market their services. (Brhlikova et al., 2011; McLeod & Wilsmore, 2002). These features apply most strongly to curative medicine (where the benefits are 'private' to the purchaser) and less to the 'public goods' of prevention and health promotion (where the benefits are not limited to the immediate recipient and it is harder to exclude non-payers, with the

consequence that governments of necessity are more involved). We therefore will focus most intensively (but not exclusively) on quality and trust issues around 'private' goods.

In order to overcome the market imperfection imposed by asymmetric information some kind of mechanism is needed to give consumers an accurate picture of what they are buying. Formal theorists in economics have concluded that markets in these goods have great difficulty achieving an efficient market unless providers are legally liable for their work (Dulleck & Kerschbamer, 2006; Dulleck, Kerschbamer, & Sutter, 2011) But effective enforcement of liability, together with other aspects of state regulation commonly are weak in Low and Middle Income Countries (LMICs) characterised by standards of governance at or below the global medium (Kaufmann, 2006).[7] It is the particularly difficult challenges faced by such states (which we call 'undergoverned') on which this article focuses. For many of these countries *do* find ways to overcome their information asymmetry problems. For example, when we began this research we were puzzled as to how in China after the end of the Cultural Revolution, when its medical services came to rely on income from private payments, the health of its population continued to improve, while other countries found privatization produced a 'race to the bottom' in quality.[8]

Alternatives to the enforcement of liability might be the provision of services by a well-organised public sector, other government regulations, industry standards, monitoring by a well-known and trusted franchise (such as a church), professional norms, the impact of international donors or international non-governmental organisations (INGOs), or even 'outcome-contingent' contracts (where the buyer does not pay until the outcome of the service is known).

When such mechanisms are socially embedded they are 'institutions'. Social scientists who study development, such as Douglas North (1990), are clear that institutions are critical to economic trajectories and that optimal ones do not necessarily emerge by themselves (Conning & Udry, 2007). These institutions encompass formal and informal societal and organisational arrangements, incentives, rules, norms, and values that shape the behaviour of market actors. Sometimes a mechanism, such as decentralisation, has come to be socially valued for its own sake. Such valuation is what makes it an institution, and this institutionalisation frequently is essential in making the mechanism effective. A better understanding of these institutions and their effectiveness in different contexts can provide important insights into how best to influence market participants to

[7] The World Bank provides a Governance score for all countries, which is a composite of scores on Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. We are treating countries at or below the median score as 'undergoverned'.

[8] Between 1980 and 2010 the 'Under 5 Mortality Rate' in China fell 72% from 65 to 18, while India's dropped only 64% from 177 to 63. (World Bank, 1997) and <http://data.worldbank.org/indicator> for 2010.

act in the public interest. This article extends this knowledge by consolidating the evidence about institutional performance across service professions in LMICs.

Although the health market is considered the quintessential example of asymmetric information (Arrow, 1963), it is far from the only one (Akerloff, 1970).. Other service sectors that similarly impact the welfare of the poor in LMICs and that also are troubled by asymmetric information problems include veterinary medicine, education, and agricultural credit. In veterinary medicine, just as in human health, success in either prevention or curative treatment depends on the efforts of *both* the purchaser and the provider of the service and *both* have imperfect knowledge of the other's competence and actions. Similarly education depends on the combined efforts of the teacher, student, peers and parents, with each experiencing limitations in what they know of the other's skills and intentions. In agricultural credit, the lender must worry about the commitment of the borrower to repayment and the latter will be concerned about the financial integrity of the former, particularly if the loan is bundled with savings or marketing functions. In short, limitations and inequalities (asymmetries) in the information required to enter into successful transactions are present in a great many professional services. So, to use the language of the New Institutional Economics, the prospects abound for moral hazard (private knowledge about whether or not a necessary action has or will occur) and adverse selection (unshared knowledge about the characteristics of a provider or recipient) (Conning & Udry, 2007). In principle there are other sectors (and broader ranges of credit) that manifest the problem of information asymmetry. But the sectors we have chosen to examine are the ones that particularly affect the poor in LMICs and about which there are substantial bodies of good research.

In this article we review what is known about institutional solutions to the asymmetric information problem throughout the preceding range of professional services in poor countries, especially those we characterize as undergoverned.. The organising 'lens' through which we *first* report on these usually separate literatures is that of human health, but the lessons are much broader and only half the evidence we cite is specific to health. We cover a range of sectors, because we want to stress both that there is useful evidence outside the literature of each separately and that the regularities in the evidence come out most powerfully only when examined comparatively.

The questions guiding our systematic search and review of the empirical literature were the following:

- ***What institutions have been used to mediate relationships among service providers and recipients?***
- ***How are these institutions helping to assure recipients of the quality for which they believe they are paying?***
- ***What is the evidence of the effectiveness of such institutions in different LMIC contexts, particularly 'undergoverned' ones?***

We are most interested in institutions that enable individual components or a service market as a whole to deliver ***effective*** products and services that are ***accessible*** to and

used by the poor. The effectiveness question involves quality (both how to ensure that the services provided meet minimum standards and how to provide incentives for improvements) and trust (how to assure the purchasers of a product or service that they are getting the quality they are being promised) (Gilson, 2006). Accessibility questions concern the arrangements in place for the needs of the poorest to be met and can lead into issues about resources, insurance and subsidy schemes. It is not feasible to address both of these broad areas in a single article, particularly as the latter involves complicated insurance issues in the health sector, so we focus on the institutions that impact effectiveness (and therefore information asymmetry) and discuss accessibility only as it is affected by them. To focus our analysis further, we concentrate on the ways in which the recipient of (or payer for) a service gains confidence in the effectiveness of what is being offered (thus omitting the part the client plays in assuring the success of the 'treatment')..

2. INSTITUTIONS

North (1990) stipulates that institutions set the 'rules of the game' for the markets within which organisations operate. Institutional sociologists use a more inclusive definition of institutions — those regularities in behaviour that are valued for their own sake, i.e., have become 'institutionalised' (Powell & DiMaggio, 1991). For us 'institutions' encompass both -- at the market level, there are 'macro'/ contextual 'rules of the game', whereas at a more 'micro' level there are formal policy instruments applied to govern the operation of specific parts of the market, and less formal values that produce and are reproduced by the ways in which particular organisations behave ((Kherallah & Kirsten, 2002), following Williamson,1985). The examples we gave at the start of this article feature deliberate, external monitoring and management of health markets. But institutions also are a product of the history of a country's social development (where the path of later developments is most often dependent on steps that were taken earlier) and of values that have become embedded in particular types of organisations. Whether we are discussing formal management practices or informal social norms, the 'rules of the game' they embody must become institutionalised (i.e., valued for their own sake) if they are to be fully effective.

Figure 1 illustrates our causal model linking institutions to professional service outcomes. A particular society will be characterized by its prevailing economic, political and social features. Many of these 'macro' attributes are not subject to change in the short-term – for example because of resource constraints, international and local distributions of power, or cultural values. Such temporarily 'fixed' features set the context within which services for the poor are operating at present and constrain the 'paths' along which they are likely to develop.

There is a considerable range of 'micro' mechanisms which exist or might be introduced at the sectoral or organizational level that could be used to overcome the acute information asymmetry problem stemming from a 'macro' context of a mixed market, poverty and weak governance – the one on which this article focuses. In order to unpack the 'micro' institutions that might be used to respond to the challenges posed by

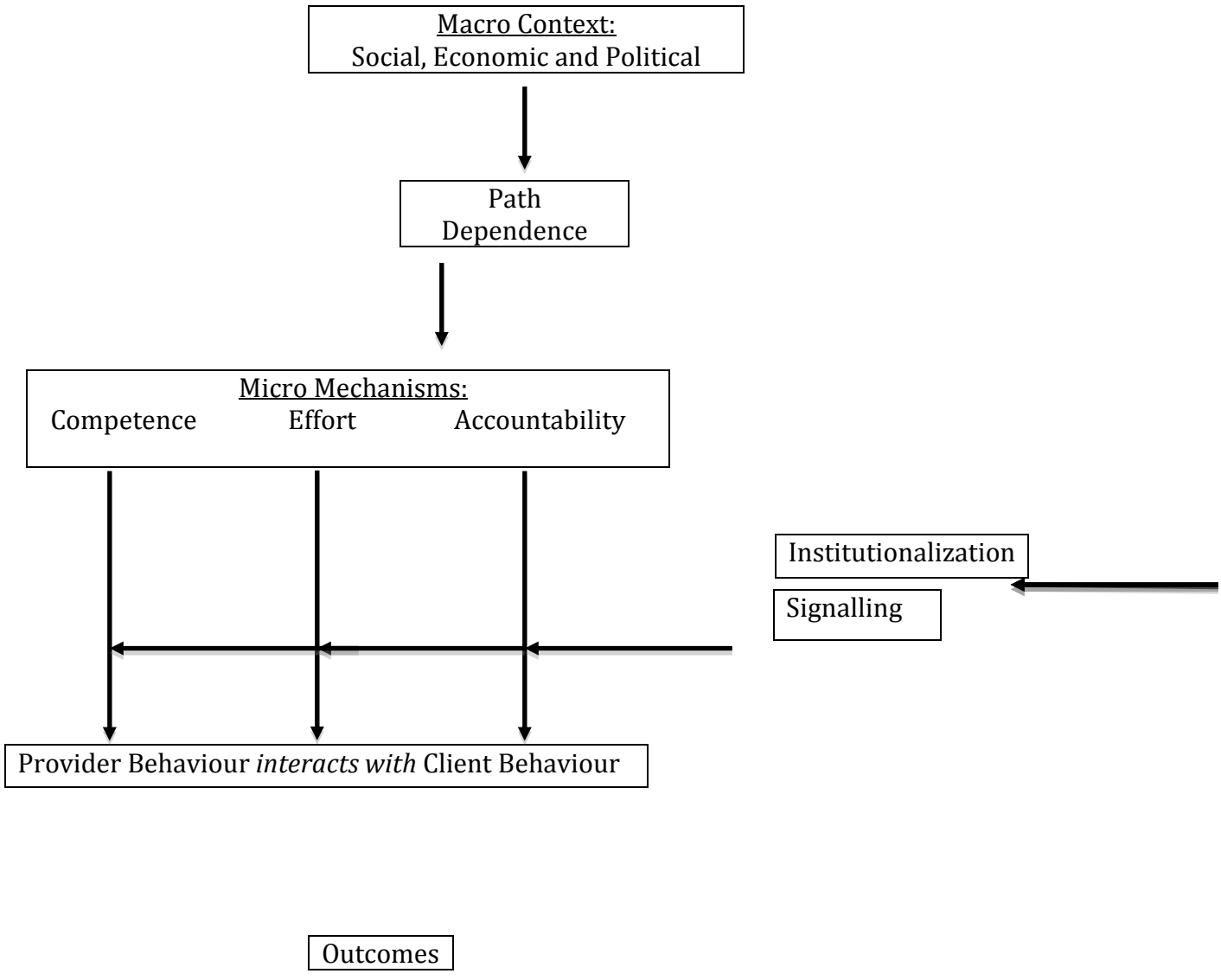

Figure 1. Causal path from context through institutions to service outcomes

Note: There are no feed-back loops for patient response drawn in the figure because these are addressed through the examination of accountability mechanisms.

information asymmetry, we distinguish between (i) the *competence* or capacity to meet a need, (ii) the *effort* applied and (iii) the assurance of *accountability* for the outcome, *as well as (iv)* the ways in which all of these are *signalled* to other parties in a prospective transaction.[9] Competence refers here to the possession of the technical skills and knowledge required to provide an effective service or intervention. Effort is the exertion of mental or physical energy to do something – for instance to determine what is wrong with a patient and to deliver an appropriate care package. (Analytically, effort includes, but cannot be reduced to, the incentives that often induce it). Accountability reflects the idea that "progress towards goals, commitments or responsibilities are assessed, and those responsible for action in these areas are held to account in some public fashion" (Collins, Coates and Szekeres 2008)*(Brinkerhoff, 2004).

Competence and effort clearly are important to positive outcomes, but potential clients will not pay for them if they do not know they exist. Thus 'signalling', through the provision of an observable and credible cue is important as a way of communicating and assuring the presence of quality features that recipients may be seeking.

These 'micro' governance mechanisms may gradually become valued for their own sake (i.e., become 'institutionalized') if the context permits them to function well, in which case they will achieve a still stronger level of influence on provider and client behaviour.

Finally, it is provider and client interactions, as shaped by the prevailing 'macro' and 'micro' institutions, that determine the outcomes of the professional service.

This model drives the structure of this article. After setting out our methods in the next section, in section 4 we discuss the socio-economic background and the 'macro' institutions that provide the context for service provision. The subsequent three sections (5 - 7) then present the different sets of 'micro' mechanisms driving provider competence, effort and accountability, respectively. In section 8 we return to the ways in which path dependence has shaped 'micro' choices in particular countries, creating variable service outcomes. The range of institutions that might shape service delivery in the weakly regulated service delivery markets of undergroverned LMICs are indicated in the Tables 1-4, which also provide a synopsis of what our literature review reveals about their relative effectiveness.

3. METHODS

All development activity depends on coordinating mechanisms and institutions, whether they be societal, organisational or inter-personal and whether they are formal or informal. One cannot provide development assistance without using them and thus either implicitly accepting the repertoire of them that already exists in a

[9] This framework was originally developed by K.L. Leonard, in D.K. Leonard, ed., 2000 and in K.L. Leonard, et al., 2007. It is paralleled and validated by the framework of Capacity, Continuity, Catalysis and Context in Balabanova, et al., eds., 2011.

society or seeking to introduce new ones. Development actors cannot abstain from or postpone decisions about institutions pending further research; assumptions about them are a pre-requisite to action. This fact has shaped the way in which we have carried out this systematic review.

The very highest standards for a systematic review, such as those set for a *Cochrane Review*, are designed to assure that no intervention is undertaken unless there is a very high probability that it is beneficial. Statistically this is known as setting a very high threshold for a Type I error. This is entirely appropriate for medical interventions, where it is possible that the body could recover on its own and the Hippocratic Oath dictates that one should do no harm. The inverse of a Type I error in statistics, however, is a Type II one, the probability that one fails to affirm the benefits of an intervention when they actually exist (Walker & Lev, 1953). Both types of error can be reduced by improvements in the quality of measurement and by larger sample sizes – in other words the confidence intervals can be narrowed in these ways – but for any given body of evidence both types of error exist. In the realm of development assistance decisions about institutions have to be made *now,* before further research is possible. In our experience over 45 years of policy research, once a decision is up for consideration politicians and senior officials rarely are willing to wait until more research has been done. Thus in our systematic review we have been careful to provide implicit confidence intervals on our assessments of the literature in order to indicate Type II as well as Type I errors, as set out at the end of this Preface.

A global review of the effectiveness of institutional mechanisms differs from a meta-analysis of a bio-medical intervention in quite fundamental ways. The units of analysis are different as are the statistical procedures that can be used, with significant implications for the way the entire systematic review is conducted.

In a typical meta-analysis of a medical intervention, the unit of analysis is the biological system of the individual being treated. In the individual studies that are brought together for the meta-analysis these individuals are assigned to treatment and control groups in a double-blind random selection process. It is reasonable to assume that confounding variables are randomly distributed in this way and thus do not require statistical controls. The individuals are treated as the units of analysis and constitute the *n* for statistical tests. These characteristics make it possible to consolidate the *n*'s of the individual studies into a larger *n* for the meta-analysis and thus achieve results that are much more robust statistically than the component studies individually.

None of these methodological attributes of a standard meta-analysis apply to a systematic review of the impact of institutional mechanisms. First, the unit of analysis is the social system subject to that institution. In medicine, for example, that system will be composed of a local group of practitioners and patients (potential as well as actual, thus including those subject to preventive measures). Measurements of the behaviour of the practitioners and of the health behaviours and outcomes of the patients are descriptive

attributes of the particular social system; they are not themselves the units of analysis (D. K. Leonard & Prewitt, 1974).

Second, it follows that the units of analysis for institutional analysis almost always are small in number, making formal statistical tests impossible or resulting in very large confidence intervals.

Third, it is rarely possible or even ethical to have random assignment in institutional trials. Sometimes one can have random selection of the patients or clients who are subject to an institutional trial (though almost never the practitioners) and this randomisation gives greater confidence to the measurement of that one particular institutional intervention. But the trial cannot be double-blind and the place where the trial is attempted is almost never randomly selected.

Hence, fourth, we always have to consciously study what the confounding impact of other social conditions might have been on the individual trial. Indeed, it is highly likely that particular institutional mechanisms will work well in some social-economic-political settings and not in other ones. The most useful systematic reviews of institutions in health and development will alert the user to precisely such facilitating or disabling social settings.

Finally, it is not possible to do trial evaluations on many critical institutions, either because it takes time for them to become valued for their own sake ('institutionalised') or because they involve societal factors (e.g., education, inequality, corruption) that will never be introduced solely on scientific grounds and therefore are subject to confounding variables.

Consequently and inevitably, a systematic review of institutional mechanisms for improving the health of the poor, although global in scope, will deploy a modest number of units of analysis and have more than usual amounts of judgment built in.

When interviewed in preparation for this study, David Peters told us that he saw his book of systematic reviews of health organizations and institutions as a "trial" of how far it was possible to go with the currently accepted standard methods. (Peters, El-Saharty, Siadat, Janovsky, & Vujicic, 2009) His conclusion was that it had clear limitations when applied to institutional questions and it is now necessary to do the next stage of research with sociological methods.

Similarly, Dominic Montagu's Cochrane type review of the relative effectiveness of public and private health care practitioners in poor countries resulted in contradictory statements (Montagu et al., 2011). On the one hand, he and his co-authors state categorically that no studies of this question have been done in poor countries (even though when we interviewed him Montagu was well aware personally of such studies). On the other, they acknowledge that some types of private performers are as good or better than public sector ones. They can know the latter to be true only because the several studies that *have* been made of this question do not conform to the

methodological standards required for a *Cochrane Review*. And they do not meet that standard precisely because it is *not possible* for the question to be answered with these methods – for the reasons we have enumerated above.

In the social sciences there are well-developed and sophisticated methods for dealing with these problems, e.g., (Collier & Mahoney, 1996). We build on the reviews (such as Das, Hammer and K. Leonard) and seminal studies of various types that *have* been done, e.g., (Mliga, 2000) in order to suggest what we know with some confidence about institutions and their facilitating contexts, to propose analytics for matching appropriate contexts to optimal institutions, and to indentify the still substantial gaps that exist in our knowledge.

In some ways, then, this article is not a "systematic review" in the strictest sense (Waddington & White, 2012). Instead we have used a variant of it to identify evidence addressing the research questions we outlined in the previous section. If we were to have tried to evaluate *all* published articles that relate to our questions across multiple sectors we would have faced an impossibly large number. We thus did a systematic search for post-1999 *peer-reviewed journal surveys* of high-quality empirical studies on institutions and management mechanisms in each area. Of course, some of these surveys were as recent as 2012 and all of them covered research done well before 2000, so the dates of empirical studies effectively are unbounded.

Only when a key topic had not been addressed in a review article did we do searches for individual articles. The search terms and engines employed are detailed in the Appendix and were used to identify research on LMICs concerned with institutions in general, and institutions in the fields of curative health, agriculture (especially credit), education, and veterinary services. We also have gathered evidence from all parts of the world, although we apply it only to the conditions found in what we will call poor undergoverned states.

In addition, we accepted the methodological standards applied by peers in the sectors and social science disciplines in which the surveys were published. At no time have we excluded from our discussion any of the findings in the surveys our searches uncovered n nor in the studies cited by them. Unlike the standard 'systematic review', however, we have supplemented the findings uncovered by our surveys with other individual studies of which we were aware when they would help to frame or extend or fill gaps in survey findings. This was particularly important given the range of sectors and disciplines on which we were drawing, for the ranges of surveys varies between them and in many there is a bias against research reported in books. We want to stress, however, that these additional materials were never used to contradict the empirical findings presented in the surveys and are clearly identified in our references. All of the types of evidence cited were read by at least two authors, always including Leonard.

Because we have been particularly inclusive with regard to evidence, we have made a special effort to be transparent about its character. In this article, evidence which takes the form of a rigorous systematic review (including studies using experimental methods)

is annotated with ^**; evidence from a peer reviewed literature review supported by several empirical studies is denoted with **; and evidence which derives from a single high quality piece of research (judged by the standards of the relevant discipline) is annotated with *. Articles with less substantial evidence bear no annotation and those that advance a probable but weakly evidenced hypothesis are annotated with a †. In addition in the summary tables we show the service sector and the region from which the evidence is drawn. An orthodox systematic review will have located at least a thousand relevant articles of highly variable quality. A critical aspect of such reviews is the criteria that were used to exclude the weaker articles. Because this article is first and foremost a review of reviews we do not have exclusion criteria. We have accepted the standards of the sector and discipline of any peer-reviewed literature survey our searches found and thus have automatically included any evidence that comes from them. These surveys are designated as ^** or ** in our text and tables. Some critical aspects of institutions have not received reviews, however, or key steps in the links between pieces of evidence have not been provided. Rather than implying that we know nothing about these issues, in these circumstances we have cited high quality articles or books of which we authors were aware (and designated them by an *). For these latter references the standards of inclusion (and thus of implicit exclusion) were those of at least two of the authors.

Finally, we have used the concepts of the New Institutional Economics to frame our analysis. This body of theory is behavioral and inter-disciplinary, drawing heavily on organisational sociology as well as comparative political science and economic history (Williamson, 1990). The NIE has its origins both in transaction cost economics and the organization theory of political scientists Herbert Simon and James March. It is reflected in various degrees by Douglas North (economic historian), Oliver Williamson and George Akerloff (economists), and Elinor Ostrom (political scientist). The NIE framework is highly compatible with the materials we found and we were able to use it without excluding or discounting any of the empirical results. At the same time the NIE facilitated teasing out some of the subtleties in the findings and making them accessible to those concerned with the design and management of service professions. An example of how the NIE can be applied to veterinary medicine in Africa, together with an explication of the key concepts, can be found in Leonard (1993).

4. **GOVERNANCE, MARKETS AND CONTEXT**

(a) The governance context

Services are affected by the quality of the state's governance institutions, which may provide them, regulate them and hold them accountable. A great many LMICs suffer in this regard, leading us to focus in this article on what we refer to as 'undergoverned' states -- those that receive World Bank governance ratings at or below the international median, reflecting particularly problems with corruption and ineffective public services (Kaufmann, 2006)*, Operationally, this has two important consequences. First, we are

Table 1A. Macro institutions shaping service markets with information asymmetry

Institution (& section of discussion)	Actor(s) initiating/ upholding	Observed effect of institution	Sector	Region	Type of evidence
Governance (4a)	State	++	C, E, H, V	AL	1^**, 1**, 1 *
Markets (4b)	Econ./ State	+/-	E, H, V	AL	2^**, 5**, 2*
Income/ capita (4c)	Econ./ State	++	H	AL	2*
Education (4c)	State	++	H	AL	2*
'Social capital' (4d)	Society	+	H	AL	1*
Inequality (4d, 7b)	Econ./ Society	- -	C, E, H, O, V	AL	3^**, 2**, 1*
Patronage (4d)	Society/ State	- -	C, H, V	AL	2^**, 2*

Notes: Column 1 gives the section of this article where the supporting evidence is presented and discussed, #3 the direction and magnitude of the observed effect, #4 the sectors that it covers, #5 the regions of the world to which the research pertains, and #6 the type of study. The codes are as follows:
Effects: A single + or - indicates a modest effect and a double one (++ or - -) a strong one, either positive or negative. Where the results of the studies are mixed, suggesting that the results depend on other variables, a +/- is used. It would be desirable to quantify to magnitude of the effects the cited studies as a whole suggest record, but such effects are contingent on the circumstances in which the mechanism is found. This in turn requires the use of multiple regression and the specification of control variables. As the latter are not necessarily applied consistently across the various studies a reliable quantitative estimate is difficult.
Service sectors: Agriculture (A), general Civil Service (C), Education (E), Health (H), societal Organisatons (O), and Veterinary Medicine (V).
Regions: All LMICs (AL), Africa (AF), Central Asia (CA), East Asia (EA), Europe (EU), Latin America (LA), Middle East (ME), North America (NA), Oceana (OC), South Asia (SA), and South-East Asia (SE).
Study types (preceded by cited number of that type of study): ^**Rigorous systematic reviews (including studies using experimental methods); **Other peer reviewed literature reviews supported by multiple empirical studies; *Single high quality pieces of research (judged by the standards of the relevant discipline).

Institutions and Asymmetric Information

Table 1B. Macro institutions shaping service markets with information asymmetry

Study	Sub-section of discussion	Sector	Region
Rigorous systematic reviews (including studies using experimental methods)			
Banerjee & Duflo, 2006	4b	C, H, E, O	SA, AF
Basu et al., 2012	4b	H	AL
Berlan & Shiffman, 2011	4b, 4c	H, O	AL
Matsubayashi, Peters, & Rahman, 2009	4a	H	AL
Molyneux et al., 2012	4c, 4d	H	AL, EU, NA
Peer reviewed literature surveys supported by several empirical studies			
Balabanova, Mills, & McKee, 2011	4a, 4b	H, O	AL
Batley, 2004	4c, 4d & 8	C	AL
Bebbington & McCourt, 2007	4c, 4d & 8	C	AL
Bloom, Champion, Lucas, Peters, & Standing, 2008	4c, 4d & 8	H	AL
Bloom, Standing, & Joshi, 2009	4b, 4c, 4d & 8	H	AL
Ferrinho et al, 2004	4b	H	AL
Grindle & Thomas, 1991	4c, 4d & 8	C	AL
Heredia & Schneider, 2002	4c, 4d & 8	C	AL
Leonard, D.K. 2000b	4b	V	AF
Leonard, D.K. 2010	4c, 4d & 8	C	AL
March & Olsen, 1984	8	C	NA
Silbermann, 1993	8	C	NA, EU, EA
Tooley & Dixon, 2006	4b	E	SA, AF
Single high quality pieces of research (judged by the standards of the relevant discipline)			
Ahuja et al., 2000	4b	V	SA
Evans, 2009	4c	H	AL
Jan et al., 2005	4b	H	AL
Kaufmann, 2006	4a	C	AL
Knowles & Owen, 2010	4a - d	H	AL
Leonard & Marshall, 1982	4a, 4d	C	AL
Leonard, D. K. et al., 2010	4d	C	AL
World Bank, 2008	4c, 4d & 8	C	AL

considering LMIC settings in which the state *in practice* does not provide *free* basic services to the poor or does so to only a limited extent. This aspect of the context is fundamental to the information asymmetry problem, for it means that the 'principal' ordering services from the organisational 'agent' is the recipient (client), not the government (Pratt & Zeckhauser, 1985). In such a setting the ideal state would create an institutional context within which *other parties* are able to buy and sell services of known quality. Second, our focus on countries where governance institutions are not strong means that such state regulation of the formal and informal markets that have grown up to provide services is weak and sometimes dysfunctional. Consequently, weak governance and poor regulation generally are associated with lower health outcomes (Matsubayashi, Peters, & Rahman, 2009)^** (Balabanova, Mills, & McKee, 2011)** (Knowles & Owen, 2010)*.

(b) Markets

Most of the poorest people in the world live in the generally undergoverned states of South Asia, China and Africa. These poor almost always receive their professional services by making formal or informal payments, not through free benefits from a state hierarchy. They therefore are operating within a market. Our review focuses on the features and imperfections of 'markets' and the institutions that affect them, rather than on the 'private' or 'public' sectors. In many LMICs formal and informal patient-provider financial transactions are pervasive in the public as well as the private sectors. A number of developing countries, such as much of Latin America, Taiwan, Malaysia, Thailand, Sri Lanka and Botswana, have established effective government-run health systems that are not reliant on market relations, but these are not the places where most of the 'poorest of the poor' live. Generally, someone who needs medical treatment undergoverned LMICs will have to pay someone for it. For example, in India less than 25% of rural health services are publicly provided (and even they usually involve informal payments) (Banerjee & Duflo, 2006; Berlan & Shiffman, 2011)^**. Likewise the non-state sector provides the overwhelming majority of curative services in Bangladesh (Balabanova, et al., 2011)**. If one makes a distinction between health practitioners with formal qualifications and 'informal' providers, government services usually are back in the majority (Basu et al., 2012)^**. But the 'informal' providers are not always inexpensive and they are competing successfully in the health market. And even 'free' government primary education often involves payments for uniforms, supplies, and instructor tutoring (Tooley & Dixon, 2006)**, while government physicians (MDs) in India in the morning provide free 'public' referrals to their own 'private' fee-paying clinics in the afternoon, making the 'public'/ 'private' distinction opaque. In the same way, animal health services in tropical Africa moved from overwhelmingly free government provision before 1980 to almost universally compensated services by 1990 (D. K. Leonard, 2000b)**. Thus in undergoverned states the distinction between 'public' and 'private' is more one of ownership and supervision, not of whether money is being exchanged. A market is present in *both* the 'public' and 'private' health sectors (Bloom, Standing & Joshi, 2009; Ferrinho et al., 2004)** (Ahuja et al., 2000; Jan et al., 2005)* and it is more useful to look at variations in the *market* than in the formal, nominal attributes of the providers. This is fundamental. When we began our research we were

divided on the 'public' v. 'private' debate and had no mandate to take a stand one way or the other on it. We found, however, that the larger number of institutional features we identified can be found *inside* both various 'public' and 'private' structures. Most often it is the context and mechanisms that are determining performance, not the 'owner'.

(c) The economic and educational macro-institutional context

The effectiveness of development services is deeply shaped by their economic and social context as well – not only the difficulty of the problems they must solve but also the human and material resources they are able to apply to them and the societal ('macro') institutions within which they are held to account. For example human health in poor countries usually rises with per capita income and then evens out at industrialised country levels. Similarly it improves with a population's education, which increases the capacity of service employees, the ability of the public to access and use benefits well, *and* creates the skills with which citizens can hold providers accountable. Further, within the market the ability of people to engage in mutually beneficial exchanges depends on the informal institutions of society that enable people to cooperate with and trust one another. (Evans, 2009; Knowles & Owen, 2010)* The context of LMICs is that in addition to low per capita incomes, average levels of education usually are lower than those of high income countries (even if they have improved significantly over recent years).

(d) The social context

Informal institutions of social capital (trust) can substitute for weak formal ones and there is greater variability among poor countries in this regard than there is with regard to governance (Knowles & Owen, 2010)*. Societal inequalities in assets or social status and local governance structures dominated by patronage also inhibit the ability of governments to provide effective development services to the poor (Berlan & Shiffman, 2011; Molyneux et al., 2012)^** (Evans, 2009; D. K. Leonard & al., 2010; D. K. Leonard & Marshall, 1982)*

(e) Contextual 'Givens' and Path Dependency

None of the aspects of the macro-institutional context of service delivery are easily changed in the near term. For example, general reform of the civil service ,which delivers all these services, is politically very difficult to achieve and significant change occurs only episodically (Batley, 2004; Bebbington & McCourt, 2007; Heredia & Schneider, 2002; March & Olsen, 1984; Silbermann, 1993)** (World Bank, 2008)*. Save in special moments of historical opportunity these macro institutions are givens, a part of the context. Thus those committed to effective delivery of development services must find context-specific ways to work with the institutions they have, making the structure and micro-institutional nature of services highly dependent on the path of political, economic

and social development their country has followed. (Bloom, Champion, Lucas, Peters, & Standing, 2008; Bloom, et al., 2009; Grindle & Thomas, 1991; D. K. Leonard, 2010)**.

5. **THE MICRO-INSTITUTIONS OF POLICY INTERVENTION: COMPETENCE**

(a) Professional qualifications

In undergoverned LMICs the quality of health care offered to poor and even middle-income patients is very often seriously deficient (Das, Hammer, & Leonard, 2008)** and this problem has been documented in the other, professional service sectors as well (D. K. Leonard, 1977)*. This problem often is traceable to lack of knowledge. For example, teachers cannot transmit information they do not have and health practitioners cannot diagnose diseases or perform procedures of which they have no understanding. Thus the institutions that provide professional qualifications, train to refresh and upgrade knowledge, and regularly supervise practice are all critical components of the quality of a service. In this regard it is unsurprising that in rural Tanzania the quality of care offered by a clinic was associated with the presence of an MD (Mliga, 2000)*, and MDs in Delhi demonstrate superior *competence* to those with lesser qualifications in both the public and private sectors (Das & Hammer, 2007)*. Cameroonian villagers who feared they had a serious ailment bypassed cheap clinics to reach much more expensive ones known for their special competence (K. L. Leonard, 2009)* and Ugandan dairy producers who would not pay the higher fees of a fully qualified veterinarian for routine care were willing to do so when surgery was required (Koma, 2000)*. As we will see below, however, the management necessary to turn higher competence into more effective service is not always provided. (For example, Das et al., 2012* found only small differences in clinical quality between the trained and untrained in rural India.)

b) Professional accreditation

Certification of qualifications at the point of *entry* to a profession is one of the few areas in which effective regulation in LMICs is common and institutionalised (Patouillard et al., 2007)^** (Ensor & Weinzierl, 2007)** (Kumaranayake et al., 2000)*. This is broadly true across the professions – for physicians, veterinarians, teachers, etc. – particularly when they are employed in government-supported settings (Rose, 2006)**. In many countries, however, differences in qualifications are signalled to the public more by the organisational setting in which practice is taking place and less well for differences between the individuals within them – a point to which we will return later.

Table 2A. Micro institutions shaping service markets with information asymmetry: *Competence*

Institution (& section of discussion)	Actor(s) initiating/ upholding	Observed effect of institution	Sector	Region	Type of evidence
pro/ Professional qualifications (5a) anti/ (5b, 6)	State	Mixed	H, V A, E, H	AF, SA AF, SA	4* 3^**, 1** 1*
Professional accreditation (5b)	State	+	E, H	AL, AF	1^**, 2**, 1*
Regulation of malpractice	State (5c)	Weak	E, H	AL, AF, SA	1**^,3**, 4*
	Priv. firms (5c)	+	H	AL	1**
	Peers (6diii)	Weak	H, V	AL, AF, SA	1^**, 1**, 1*
Use of para-professionals (5d)	State	+/Weak	H, A	AL, LA	1^**, 2*
	Private	+/-	E, V	AL, AF, SA	2^**, 2**
	NGOs	++	H, V	AF	2*
Visible ongoing training and supervision (5e)	Service providers	++	A, H, V	AL, AF	3^**, 2**, 7*

See notes at Table 1A.

Table 2B. Micro institutions shaping service markets with information asymmetry: Competence

Study	Sub-section of discussion	Sector	Region
Rigorous systematic reviews (including studies using experimental methods)			
Banerjee & Duflo, 2006	5d	C, H, E, O	SA, AF
Basu et al., 2012	5d	H	AL
Chopra et al., 2008	5d	H	AL
Goodman et al., 2007	5d	H	AF
Patouillard et al., 2007	5b	H	AL
Patrinos, Barrera-Osorio, & Guáqueta, 2009	5d	E	AL
Peters et al., 2009	5d	H	AL
Shah, Brieger, & Peters, 2010	5d	H	AL
Peer reviewed literature surveys supported by several empirical studies			
Bloom, Champion, Lucas, Peters, & Standing, 2008	5d	H	AL
Catley et al., 2004	5d	V	AF
Das, Hammer, & Leonard, 2008	5a, 5b	H	AL
Ensor & Weinzierl, 2007	5b, 5c, 5d	H	AL
Kohler & Baghdadi-Sabeti, 2011	5c, 5d	H	AL, EU, NA, OC, SE
Peeling & Holden, 2004	5d, 5e	V	AL
Rose, 2006	5b, 5c, 5d	E	AF, SA

Tooley & Dixon, 2006	5e	E	SA, AF
Single high quality pieces of research (judged by the standards of the relevant discipline)			
Bett, et al., 2004	5c	V	AF
Das & Hammer, 2007	5a, 5b	H	AF
Das et al., 2012	5a, 5b	H	SA
Knowles & Owen, 2010	5c	H	AL
Koma, 2000	5a, 5e	V	AF
Kumaranayake et al., 2000	5b	H	AF
Leonard, D. K. 1977	5a, 5d, 5e	A	AF
Leonard, D. K. 1991	5d	C	AF
Leonard, D.K. 1977	5a, 5d, 5e	A	AF
Leonard, D.K. 2000a	5e	V, H	AF
Leonard, K. L. 2009	5a, 5d, 5e	H	AF
Ly, 2000	5d, 5e	A, V	AF
Mliga, 2000	5a	H	AF
Peters & Muraleedharan, 2008	5c	H	SA
Tendler, 1997	5d	A, H	LA

(c) Regulation of practice/ malpractice

In the undergoverned LMICs on which we are focusing, the regulation of competence and effectiveness in day-to-day *practice* generally is weak or non-existent (Rose, 2006)**. Hence, the strength of a state's formal institutions is closely related to the health status of its population (Knowles & Owen, 2010)*. For example, corruption is negatively correlated with health indicators and is a serious concern in the procurement of pharmaceuticals (Kohler & Baghdadi-Sabeti, 2011)**. Regulatory weaknesses are more likely in undergoverned states and are an important part of the institutional context within which their health and development services operate. In many countries most rural private pharmacies have no staff with any kind of professional qualification on the premises, despite formal regulations requiring their presence (Bloom, et al., 2009)** (Bett, et al., 2004; Ensor & Weinzierl, 2007)*. Use of the law to control medical malpractice in India is judged ineffective (Peters & Muraleedharan, 2008)* although it is more evident in China. Where regulation of malpractice was found in LMICs it generally occurred through partnerships with key private stakeholders who would profit from enforcement (Bloom et al., 2009)**.

(d) Paraprofessionals

The rural poor and especially those who live in remote areas have particular difficulty obtaining services because the better educated providers are reluctant to live there and when they do so are frequently absent from their posts (Banerjee & Duflo, 2006)^**. Professionals also often are culturally distant from the rural poor, which detracts further from their motivation to serve them well. Even veterinarians, who are much more

attracted to rural life than teachers or physicians, are reluctant to live with pastoralists. As a result, the posting to remote areas of fee-charging staff with only basic but expert-provided external training can lead to substantial improvements in service delivery, because they may be culturally better attuned with their clients than highly qualified professionals and provide them with better real access to assistance for relatively simple but serious and endemic problems. Such was the logic underlying the 'bare-foot doctors' initiative of China's Cultural Revolution and the community health workers proposed in WHO's Alma Ata Declaration of 1978. Initially many of these workers were community-supported rather than fee charging, but over time they have evolved toward the latter. The reduction in livestock mortality rates of African pastoralists through the deployment of fee-charging Community Animal Health Workers with limited training is particularly clear (Catley et al., 2004; Peeling & Holden, 2004)**. Similar success with community (human) health workers has been reported for a range of tasks in LMICs (Chopra et al., 2008)^** (Tendler, 1997)*.

The problem with the use of minimally trained service staff is not with the staff themselves, for they can be highly effective at preventive and simple curative human and veterinary medicine as well as at agricultural extension. Private schools whose staff lack teaching certificates also often out-perform government ones whose teachers have better formal qualifications, even when serving the poor (Patrinos, Barrera-Osorio, & Guáqueta, 2009)^** (Rose, 2006)**. Nor is the problem that they or their organisations are charging for their services and that they therefore are in the market. The issue instead is that the training they receive must be well done and they must continue to receive effective support, supervision and updating throughout their service lives. In other words they must be backed by institutionalised 'organisational intelligence' (Goodman et al., 2007; Patrinos et al., 2009; Peters et al., 2009; Shah, Brieger, & Peters, 2010)^** (Catley, et al., 2004; Peeling & Holden, 2004)** (D. K. Leonard, 1977; Ly, 2000)*. If these staff succeed in being absorbed into the regular civil service – as frequently is their ambition --– and their management is neglected, their effectiveness can drop significantly (D. K. Leonard, 1977, 1991)*. On the other hand, when they remain in the private voluntary sector and are subject to strong management – as often has been the case with missions in Africa – they can outperform government facilities with better trained staff (Ly, 2000; Mliga, 2000)*. However if they drift away from the organisations that trained them and become wholly autonomous, as has occurred in many countries, they can become no better than untutored drug sellers, cut off from professional support and supervision and with documented problems with safety, effectiveness of treatment and costs (Basu, et al., 2012)^** (Bloom et al., 2008)**.

(e) Visible training and supervision

When strong management is visible to the consuming public it reduces information asymmetry by 'signalling' the quality of the work actually done by the minimally-qualified staff and thereby increases clients' willingness to pay for more of the service they provide. Thus in Senegal pastoralists were willing to buy more preventive animal health measures from the Community Animal Health Workers of a Lutheran mission that

provided strong support and supervision than they were from a similar government service in a neighbouring area (Ly, 2000)*. Similarly, a study in Cameroun demonstrated that even the poor were willing to pay more for quality medical service when they believed they had a condition that justified it (D. K. Leonard, 2000a; K. L. Leonard, 2009)*. In a variety of professions there is a demonstrated willingness to pay for more of the services provided by well-supported and supervised, minimally-qualified providers, when the quality they are offering is relevant to the purchaser's needs (Tooley & Dixon, 2006)** (Koma, 2000)*.

6. MICRO-INSTITUTIONS: EFFORT

Quality of service provision; depends on effort as well. as raw competence. In LMICs there often is a substantial gap between what a practitioner is capable of doing and knows s/he *should* do in treating a patient and what s/he *does in practice.* This gap between routine performance and what is done under the eyes of a supervisor or researcher is known as the 'Hawthorne effect' and has been clearly demonstrated among medical clinicians in Tanzania (K. L. Leonard & Masatu, 2006; K. L. Leonard, Masatu, & Vialou, 2007)*. Absenteeism of professional staff also is documented for health facilities in India and for schools there and in East Africa (Banerjee & Duflo, 2006)^** (Tooley & Dixon, 2006)**. Even when professions are well regulated, the effect on performance of education, professional qualifications, and training is complex and not automatic. For example, more highly educated agricultural extension agents in Kenya were found to have less, not more, practical information than those with lower qualifications (D. K. Leonard, 1977)*. Similarly the impact of supplemental training on medical quality has been found to be very modest (even if positive) when not accompanied by other measures. Motivation to *use* what is learned is essential (Patouillard et al., 2007; Peters et al., 2009; Shah et al., 2010)^**.

(a) Organisational incentives

The effects of the incentives under which service staff work can be quite significant – positively and negatively. (Banerjee & Duflo, 2006; Lagarde, Powell-Jackson, & Blaauw, 2010)^** (Peeling & Holden, 2004)** (Basinga et al., 2011; D. K. Leonard, 1987; K. L. Leonard, Masatu & Vialou, 2007; Mliga, 2000)*. Where incentives are too strong, health providers may supply too many interventions or drugs, to the point where these have no additional benefit or are even harmful (Berlan & Shiffman, 2011; Eldridge & Palmer, 2009)^**. So achieving the correct balance between incentives that increase effort and those that induce 'overtreatment' is a challenge.

Where might the appropriate incentives come from?

(i) Undergoverned states manage their resources in ways that provide only weak incentives. In other words, hirings, promotions, good postings, and even praise, etc. are made in such a way as to reward effort on the organisation's mission only to a modest degree, if at all (Banerjee & Duflo, 2006; Banerjee & Duflo, 2010)^** (Rose, 2006)**

(D. K. Leonard, 1977)*. This weak incentive effect is at odds with the considerable sums governments expend for health, education and animal disease prevention and control.

(ii) Donors, acting through NGOs and other contractors, also provide substantial resources but these often are managed in a way that produces more positive incentive effects than poor governments achieve (Loevinsohn & Harding, 2005)*. The direct effects of donor interventions tend to be positive but there can be indirect negative consequences as well on the services that are not targeted (Cohn et al., 2010)^**.

Table 3A. Micro institutions shaping service markets with information asymmetry: *Effort*

Institution (& section of discussion)	Actor(s) initiating/ upholding	Observed effect of institution	Sector	Region	Type of evidence
Incentives to reward effort – hiring, promotions, good postings, salaries, bonuses, renewable accreditation	State (6ai)	Weak	A, E, H	AL, AF, SA	2^**, 1**, 1*
	Donors (6aii)	Strong/ mixed	H	AL	2*
	Value-based NGOs (6dvii)	Strong	H, V	AF, SA	4*
Direct payments in general (6b)	Users	++	H, V	AL, AF, SA, SE	5**, 4*
Direct payments to individuals (6ci,ii)	Users	+/-	H, V	AL,NA	4^**, 2**
Direct payments to individuals contingent on outcome (6cii)	Users	++	H, V	AF, EA	1**, 3*
Direct payments to organisations (6d)	Users	++	C, E, H	AL, AF, EA	5^**, 1**, 2**
Social franchising (6e)	Users	Unclear	H	AL	4^**, 1**
Contracting – Access (6e)	Donors, State	++	H, V	AL, EU, AF	2^**, 1**, 1*
Contracting – Quality	Donors (6e)	Mixed	E, H	AF, SA	2^**, 2**, 1*
	Value-based NGOs (6dvii)	++	H, V	AF, SA	4*

See notes at Table 1A.

Table 3B. Micro institutions shaping service markets with information asymmetry: *Effort*

Study	Sub-section of discussion	Sector	Region
Rigorous systematic reviews (including studies using experimental methods)			
Acemoglu, Kremer, & Mian, 2006	6d	H, E, C, O	AL, NA, EU, OC, EA
Banerjee & Duflo, 2006	6a, 6b, 6c	C, H, E, O	SA, AF
Banerjee & Duflo, 2010	6d	A	AL
Basu et al., 2012	6c	H	AL
Berlan & Shiffman, 2011	6a, 6b	H, O	AL
Chaix-Couturier et al., 2000	6c, 6e	H	AL, NA, EU, OC, EA
Chopra et al., 2008	6d	H	AL
Cohn et al., 2010	6d	H	AL
Eldridge & Palmer, 2009	6d	H	AL
Gosden et al., 2006	6c	H	AL, NA, EU, OC, EA
Koehlmoos et al., 2009	6e	H	AL
Koehlmoos et al., 2011	6e	H	AL
Lagarde & Palmer, 2008	6c	H	AL
Lagarde & Palmer, 2009	6e	H	AL
Lagarde, Powell-Jackson, & Blaauw, 2010	6c	H	AL
Liu, Hotchkiss, & Bose, 2008	6e	H	AL
Lönnroth, Uplekar, & Blanc, 2006	6e	H	AL
Oxman & Fretheim, 2008	6c, 6d, 6e	H	AL
Peters et al., 2009	6e	H	AL
Petersen et al., 2006	6e	H	AL
Shah, Brieger, & Peters, 2010	6d	H	AL
Witter et al., 2012	6d	H	AL
Peer reviewed literature surveys supported by several empirical studies			
Anonymous, 2008	6e	H	CA
Balabanova, Mills, & McKee, 2011	6b	H, O	AL
Bebbington & McCourt, 2007	6d	C	AL
Berendes et al., 2011	6d	H	AL
Bloom, Standing, & Lloyd, 2008	6e	H	AL
Catley et al., 2004	6b, 6c, 6e	V	AF
Conning & Udry, 2007	6b	A	AL
Das, Hammer, & Leonard, 2008	6b, 6c	H	AL
Eichler & Levine, 2008	6e	H	AL
Eichler, 2006	6e	H	AL
Ensor & Weinzierl, 2007	6a, 6d	H	AL
Gilson, 2006	6c	H	AL
Hansen et al., 2008	6e	H	CA
Larbi, 1999	6e	C	AL
Leonard, D.K. 2000b	6b	V	AF
Lewis, 2007	6b	H	AL

Manning, 2001	6e	C	AL
Mathias & McCorkle, 2004	6c	V	AF
McLeod & Wilsmore, 2002	6b	V	AF
Peeling & Holden, 2004	6b, 6c, 6d	V	AL
Peters et al., 2007	6e	H	CA
Rose, 2006	6a, 6d	E	AF, SA
Sen & Chander, 2003	6b	V	AL
Tooley & Dixon, 2006	6b	E	SA, AF
Vian, 2008	6b	H	AL
Single high quality pieces of research (judged by the standards of the relevant discipline)			
Ahuja et al., 2000	6b	V	SA
Amin, Hanson, & Mills, 2004	6b	H	SA
Basinga et al., 2011	6d	H	AF
Bloom, 2011	6d	H	EA
Doner & Schneider, 2010	6d	O	AL
Dulleck, et al., 2011	6c	H, E, V, A	AL, NA, EU, OC, EA
Fang, 2008	6c	H	EA
Friedson, 1970	6d	H	AL, NA, EU, OC, EA
Hellberg, 1990	6e	V	EU
Holmstrom, 1982	6d	-	-
Leonard & Marshall, 1982	6d	C	AL
Leonard K. L. & Masatu, 2006	6a	H	AF
Leonard, D. K. 1977	6d	A	AF
Leonard, D. K. 1987	6b, 6c, 6d	V	AF
Leonard, D. K. 2000a	6b, 6d	V, H	AF
Leonard, D. K. et al., 2010	6d	C	AL
Leonard, K. L. 2003	6c	H	AF
Leonard, K. L. 2007	6c, 6d	H	AF
Leonard, K. L. 2009	6a, 6b, 6d	H	AF
Leonard, Masatu, & Vialou, 2007	6a, 6d	H	AF
Loevinsohn & Harding, 2005	6d, 6e	H	AL
Ly, 2000	6d	A, V	AF
Mackintosh, Chaudhuri, & Mujinja, 2011	6e	H	AL
Mehrotraa & Panchamukhia, 2006	6b	E	SA
Mliga, 2000	6a, 6b, 6c, 6d	H	AF
Ndeso-Atanga, 2000	6c	H	AF
Palmer & Mills, 2005	6e	H	AF
Schick, 1998	6e	C	AL
Standing & Chowdhury, 2008	6d	H	AL
Tibandebage & Mackintosh, 2005	6d	H	AF
Williamson, 1975	6d	-	-
Williamson, 1984	6d, 6e	-	-

b) User payments

(i) User payments. Alternatively, the recipients of the services themselves might provide inducements which, even if they only supplement the much more substantial investments of governments and donors, nonetheless provide incentives for quality efforts that matter to and are visible to them as consumers. Fees are not inducements unless they add to the budget of the recipient organisation, of course. If they are transmitted into the national budget or substitute for it they are not inducements or incentives – and that is they way most fees in *government* facilities actually have been used. (Das, Hammer & Leonard, 2008)** (D. K. Leonard, 1987; K. L. Leonard, 2009; Mliga, 2000)*. On the other hand, informal fees paid directly to service workers can exert greater power over their behaviour (Lewis, 2007)**, but are not easy to monitor.

(*(ii) Feasibility of user payments by the poor.* User payments raise the further question of whether the poor have sufficient resources to have an incentive effect. It is a basic principle of economics that demand curves downward in response to price and consumers will switch to cheaper outlets for the same products or reduce consumption when prices are raised. Certainly fees can be regressive and reduce access for the poor (Berlan & Shiffman, 2011)^** (D. K. Leonard, 2000a)**. When Kenya suddenly eliminated fees for primary education there was a dramatic increase in school enrolment, making it obvious that cost had led many poor to forgo this service for their children. The impact can be even greater for services for which the benefit may not be obvious (such as preventive measures) or services that are very expensive relative to incomes, including hospital care for a serious illness (Lagarde & Palmer, 2008)^**. Nonetheless, enough of the poor are willing to commit sufficient resources so as to incentivize and shape provider behaviour – at least for services that impact near-term catastrophic events (such as agricultural credit and human and animal health), especially in countries in which there is not substantial landlessness (Conning & Udry, 2007)**. Most health care in LMICs is being provided in fee-paying settings and even the poor are willing to pay for access to providers who charge more than the lowest price *when they are persuaded they have a health condition that merits it and that the higher-priced provider is the least expensive option that can deal with the condition effectively* (Balabanova et al., 2011)** (K. L. Leonard, 2009)*. The evidence for veterinary medicine is even stronger, where modest payments can induce attention from practitioners who otherwise would ignore the poor (D. K. Leonard, 1987)*. For example, surveyed livestock holders in East Africa and the Philippines expressed a *preference* for paid Community Animal Health Workers over free government workers (Catley et al., 2004; McLeod & Wilsmore, 2002; Sen & Chander, 2003)** and at least half the urban poor are paying to go to private schools in India (Tooley & Dixon, 2006)** (Mehrotraa & Panchamukhia, 2006)*.

The extensive literature on rural credit follows Amartya Sen in noting that the poor are better able to survive and recover from modestly severe adverse events *when they have access to land*, for it gives them capital against which they can borrow (Conning & Udry, 2007)**. The latter point may be one of the factors that combine to explain the greater quality in the fee-for-service markets of China and with church providers in Africa than there is for India or Pakistan, where wide-spread landlessness makes financial catastrophe

from adverse events more prevalent (Chambers, 1983)†. Research to confirm this hypothesis for services other than rural credit is missing, however.

Furthermore we have some evidence that those who charge fees discriminate positively toward the poor (i.e., charge only as much as they think they are able to pay), so that the burden on the poor of fees may not be as great as is usually feared (McLeod & Wilsmore, 2002)** (Amin, Hanson, & Mills, 2004; D. K. Leonard, 1987)*. Nonetheless, the issue here is not whether the poor deserve government-subsidised services; they do. A large part of fee-for-service health care for the poor is in fact appropriately subsidised by the government, not to speak of donors.

The point instead is that in actual practice even the very poor are spending enough of their own funds on health care and other rural services to influence the ways in which their providers behave. We noted earlier that in most undergoverned LMICs even state employees in health, education and animal health in practice are deriving income from informal payments from those they serve (Banerjee & Duflo, 2006; Berlan & Shiffman, 2011)^** (Bloom et al., 2009; Lewis, 2007)** (D. K. Leonard, 2000b)*. For example, government animal health workers in India take private side-payments for their services that are the same as the charges of purely private providers. Government salary may well drive down the price for all services (benefiting poorer consumers) but it also provides a 'rent' to the government service provider. (Sen & Chander, 2003; Vian, 2008)** (Ahuja, et al., 2000)*.

Nonetheless the institutional form in which these privately delivered incentives are provided matters considerably.

(c) Payments direct to individual providers

(i) Quantity. When fee income goes directly to the individual provider it may do no more than stimulate *quantity* of effort, not quality. A systematic review of developed country literature on payment systems and physicians' clinical behaviour found some evidence that primary care physicians provide a greater *quantity* of primary care services under government or philanthropic fee-for-service payment compared with capitation and salary (Gosden et al., 2006; Lagarde, et al., 2010)^**. Public or philanthropic financial incentives can stimulate delivery of services for which demand is insufficient, such as the delivery of immunizations or screening tests. Similarly, conditional cash transfers and other economic incentives targeting healthcare recipients can increase the use of preventive services. However, financial incentives are more likely to influence discrete individual behaviour in the short run, and effects in the long run are unclear. They also can have unintended effects, like corruption and making patients wary of the motives of the provider.

(ii) *Quality.* If they stimulate only *quantity*, fees for service contribute as well to the widely observed tendency for 'a race to the bottom' among most practitioners by inducing activity at the margin that is of limited or no value, rather than stimulating

higher *quality*. (Chaix-Couturier et al., 2000; Lagarde et al., 2010; Oxman & Fretheim, 2008)^** (Gilson, 2006)**.

The debate about the effects of private payments on the quality of services is usually conducted as a comparison of publicly and privately owned and managed facilities. But private payments are quite common in the public sector of undergoverned countries and the private sector to which comparison is made may or may not include both the formally qualified practitioners in profit-seeking and charitable settings as well as the untrained operating informally. Health studies that use an undifferentiated definition of 'private' and assume that all government services are outside the market suggest that public quality is better (Basu, et al., 2012)^**. But this ignores the impact of formal qualifications on quality we acknowledged above and that some of these differences are so visible that we must assume that consumers are making conscious choices between them. Our reading of the literature is that the public v. private *ownership* debate is obscuring many other important institutional factors, such as the nature of the service 'contract', the organizational setting, and social context in which the service is being delivered (Das & Hammer, 2007) (Dulleck, et al., 2011)*.

Most private payments in LMICs for veterinary medicine are directed to individuals, which is similar to what public sector physicians are collecting in after-hours private practices in India (D. K. Leonard, 1987)*. In the case of animal health to pastoralists in Africa we know that the increased access provided by the larger quantity of service stimulated by fees was of sufficient quality as to have identifiable positive effects on animal mortality (Catley et al., 2004; Peeling & Holden, 2004)**.

(iii) 'Contingent contracts'. Direct payments to 'traditional healers' and midwives also may avoid a 'race to the bottom' in some settings because of their ability to write 'outcome contingent contracts'. 'Traditional healers' in rural Africa – much of whose work on wounds, broken bones and animal health has been found to be effective (Mathias & McCorkle, 2004)** – charge only a very small initial fee and expect most of the payment to come only much later when patients knows they have been cured. This 'contract' usually is found only in rural areas where practitioner and patient know each other. But it also is possible because most patients believe they can be cursed if they lie about the outcome or renege on the payment (K. L. Leonard, 2003)*. In the case of midwives in Cameroun, as a delivery is known to be successful shortly after birth, the payment of an 'appreciation' before leaving has a clear quality effect (Ndeso-Atanga, 2000)*. Both of these situations are exceptional, in that results are visible, significantly reducing information asymmetry and thus creating incentives that are more quality sensitive.

Outcome-contingent contracts are difficult for most forms of rural service, although one begins to approach their effects when there are repeat transactions between the parties over a considerable period (K. L. Leonard, 2007)*. For instance, a study in rural China documents how local accountability networks (guanxi) put pressure on village doctors to take the needs of patients into account but have much less influence on high-level

facilities. For example a doctor may have to refund the cost of drugs if they do not work (Fang, 2008)*.*.

(d) Payments to organisations

It would appear that incentives (in the form of jobs, salaries, bonuses and spoken appreciation) that are mediated through organisations are more likely than payments to individuals to have a positive effect on quality but only if the values of quality and service are institutionalised in the organisation (Oxman & Fretheim, 2008; Shah et al., 2010)^** (Tibandebage & Mackintosh, 2005)*. There are several components to this proposition:

i. Organisations have a greater ability to signal a commitment to quality than practitioners do as individuals. Because facilities have a physical and continuous presence they are much more visible to the public and more subject to public discussion than individual practitioners within them (K. L. Leonard, 2007)*. For the same reason *facility* accreditation is somewhat more likely to be subject to review at renewal (Ensor & Weinzierl, 2007)**.

ii. Organisations have a greater *ability* to observe and reward the performance of their staff than individual users of the service do. Because of information asymmetry individual users do not always know when they are being badly served. This is particularly the case in human and animal health because of the variable effectiveness of treatment, where bad care might nonetheless result in recovery and a 'state-of-the-art' intervention could still fail. A similar, even if somewhat smaller, imprecision in user judgments about quality is also evident in education. Students and parents often do not know the real value of the teaching they have received until they see their national school-leaving exam results. And even then they cannot be certain which teachers are responsible. Particularly if the organisation decentralises personnel management to the facility level, it *can* make formal or informal observations of the quality of the processes in which its employees are engaged and has a wide array of rewards and punishments it can apply relatively quickly.

iii. Monitoring of the quality of individual practitioners *could* be provided by regulation from government or professional peers, overseeing individual practices. But even in OECD countries regulation has been more effective at licensing (competence) than it has been at monitoring quality of effort and has sometimes instead been used to protect vested professional interests (Friedson, 1970)*. Regulation of effort is even weaker and has more potential to be negative in undergoverned LMICs, (Patouillard, et al., 2007)^** (Ensor & Weinzierl, 2007; Peeling & Holden, 2004)** (Kumaranayake et al., 2000)*.

iv. Organisations that directly manage individual practitioners are *more likely* (but still are not assured) to provide effective oversight and associated incentives, for they are more likely than individuals to be able to signal their character and thus to benefit from

extra custom and increased income through the provision of quality. Explicit incentive payments may be paid to individual practitioners but it is important that they be mediated by the group or organisation in its collective interest, not made directly (Acemoglu, Kremer, & Mian, 2006; Chopra et al., 2008; Kremer & Holla, 2008; Oxman & Fretheim, 2008; Shah et al., 2010; Witter et al., 2012)^** (Bloom, 2011)*. In the language of the New Institutional Economics, the nature of the goods being provided in many of these health and development services is such that local 'hierarchies' are needed to mediate between the market and the consumer if quality is to be delivered, even to those who want it.

In the analysis of New Institutional Economists the organisation has the ability to offer 'budget-breaking'/ 'non-conservative' institutions. A 'conservative' institution is one, such as fees or tort settlements, where what one party pays the other gains – conserving value. Such an institution has disadvantages when the link between the provider's actions (outputs) and the outcomes experienced by the consumer are not automatic. A 'conservative' set of court-enforced torts thus might lead to a malpractice suit where nothing was done wrong and no suit at all when errors were made but the patient avoided injury by chance. A 'non-conservative' institution does not require a direct link between a charge or compensation for the patient and a bonus or penalty for the individual provider. Thus the employing organisation might sanction or reward the behaviour of its practitioners, even when there was no feedback from the recipients. This latter type of institution permits more rigorous assessment of professional quality by the organisation itself, independent of the probabilistic element of outcomes. (Leonard, D.K., 2000a)†. The classic article on this point says: "In a well-known paper, Alchian and Demsetz (1972) argue that efficiency can (and will) be restored by bringing in a principal who monitors the agents' inputs. My first point will be that the principal's role is not essentially one of monitoring. ... the principal is needed, either to enforce the penalties or to finance the bonuses. Thus, the principal's primary role is to break the budget-balancing constraint." (Holmstrom, 1982)*). .

Again the New Institutional Economics suggests that the nature of the goods being provided in many of these health and development services is such that local 'hierarchies' are needed to mediate between the market and the consumer if quality is to be delivered, even to those who want it. Williamson would say the local organization thus has 'asset specificity' in two regards – the selection and management of its employees, and the market value of its reputation, which it can create more easily than the individual practitioner because of long repeated transactions with consumers/ clients (O. E. Williamson, 1975, 1984)*. Where there are strong information asymmetries these attributes lead to a preference in undergoverned societies for local 'hierarchies' over against disaggregated 'markets' as a form of economic organization. (See also the last chapter in (D. K. Leonard, 2000a)*.

v. Nonetheless, the costs to an organisation of establishing a reputation for institutional quality are significant. It *appears* from the preceding empirical evidence that the returns to a reputation in additional or higher paying custom are sufficient to *maintain* quality effort but *in themselves* are not enough to induce most organisations to *create* it.†

Thus the organisations that have invested in the creation and maintenance of quality are more likely to have had pre-existing 'other-regarding'/ altruistic values. There are settings in which such values are well- institutionalised in the public sector, particularly in the better -governed countries. For example, in democratic Brazil it was possible for reformers in one state to draw on the values developed by progressive public health leaders during their resistance to military dictatorship. (See: (Tendler, 1997; Bebbington & McCourt, 2007)* which is one the factors helping to explain the higher quality service they provided*.

vi. In the larger number of public entities in undergoverned states, however, quality values are insufficiently institutionalised or management is too inadequate to provide effective incentives to service employees, because of the presence of weak incentives to managers and the pervasiveness of patronage (D. K. Leonard & al., 2010)*. For example, a randomised trial in Kenya found that primary school headmasters refused to apply donor-financed bonuses in an incentive enhancing manner (Acemoglu, et al., 2006)^**.

vii. In otherwise difficult environments well-performing value-led organisations are exemplified by the services of many Christian missions in parts of Africa (K. L. Leonard, Masatu & Vialou, 2007; Ly, 2000; Mliga, 2000)*[10] and the Bangladesh Rehabilitation Assistance Committee (BRAC) in South Asia (Standing & Chowdhury, 2008)*. The presence or absence of such value-driven organisations is a part of a country's deep institutional context, which contributes to path dependence. Countries have different institutional repertories and thus will have different tools available with which to overcome their problems with information asymmetry. But that inventory also might be changed by donors or political initiatives that make the long-term, initially-costly investments in new institutions.

(e) Contracting

The superior performance of values-led NGOs in undergoverned situations raises the question of whether contracting in general or, more narrowly, social franchises might be a way to overcome the problems of government service organisations. (Social franchises are a contractual arrangement between a franchisee, usually a small business, and a franchisor, usually a larger organisation or business, to provide a standardized service or product according to guidelines set by the franchisor. In health, the franchisor is commonly an international NGO receiving donor financing to establish and run the network. (Montagu, 2002).) In one sense most of the mission health facilities in Africa are operating under quasi-contracts, since they receive government subsidies for their services. The real question then is how easily organisations with similar performance

[10] A partial dissent to this view is provided by (Berendes et al., 2011)**. The paper does find that private practitioners were outperforming public ones in Africa, but holds that for-profit had better technical quality than not-for-profit. Unfortunately the supporting table is no longer available on the web so the basis for the latter view could not be explored.

characteristics to these missions can be created from scratch and whether they might even be private-for-profit organisations? It is clear that contracting can be used to expand *access* to service facilities in remote areas that might otherwise not be served (Lagarde & Palmer, 2009; Liu, Hotchkiss, & Bose, 2008)^** (Catley et al., 2004)** (Hellberg, 1990)* . The evidence for improvement in the quality of service, however, is mixed in general and for social franchises is inconclusive (Koehlmoos et al., 2011; Koehlmoos et al., 2009; Patouillard et al., 2007; Peters et al., 2009)^** (Ensor & Weinzierl, 2007; Loevinsohn & Harding, 2005)**. Unfortunately not all the systematic reviews for health on this subject do a good job of exploring the observed variations or what may be the underlying causal processes. It appears, however, that most of the social franchises that are not having an effect are providing only training and have no effective regulatory discipline, which then would be consistent with what is observed in other types of studies (Koehlmoos et al., 2011)^**. It also seems that most of the franchises on reproductive health have generated insufficient revenue for providers to want to absorb the costs of coordination and reputation building (Bloom, Standing, & Lloyd, 2008)**. More generally, contracting (including performance-based incentives) *can* achieve quality improvements, but this is highly dependent on the quality of the contract management (Liu et al., 2008)^** (Eichler & Levine, 2008)**.

Contracting is a key aspect of the New Public Management (NPM) and we do know that poor countries have rarely been successful in writing and enforcing the well-specified performance targets required to make such contracts work (Larbi, 1999; Manning, 2001; Schick, 1998)** (Schick, 1998)*. Unintended consequences of attaching financial incentives to performance targets are always a serious danger, whether within or between organisations (Chaix-Couturier et al., 2000; Lagarde & Palmer, 2009; Oxman & Fretheim, 2008; Petersen et al., 2006)^** (Eichler, 2006; Eichler & Levine, 2008)**. It is not likely to be possible to overcome these problems unless the contract is a relational one (and thus based on constant renegotiation and hopes of many renewals) – and even then success depends on willingness to use the flexibility that the relationship provides to enforce quality (Lönnroth, Uplekar, & Blanc, 2006)^** (Eichler & Levine, 2008; Lönnroth et al., 2006)** (Mackintosh, Chaudhuri, & Mujinja, 2011; Palmer & Mills, 2005; Williamson, 1985)*. The Balanced Score Card method of evaluating contract performance has had positive results in Afghanistan. But this was done with donor funds and American and Indian technical assistance, leaving us still with the critique applied to the NPM -- that well-specified performance targets are hard to develop and enforce in conditions of weak governance (Anonymous, 2008; Hansen et al., 2008; Peters et al., 2007)**. Donor-financed international NGOs – which often have well-institutionalised values and a reputation at stake – may well be able to write and enforce contracts with high standards (as in the social franchise model) but if the intention is then to continue these contracts through governments with poor regulatory capacity, quality probably will be hard to sustain. We hypothesize that only if external contracts demanding high standards of service and professionalism are continued long enough for those values to become institutionalised in the *local* NGOs that will receive the later governmental contracts is quality likely to survive the transition.† Of course local health and development organizations that already have institutionalized such values will not require the same lengthy and rigorous contract supervision.

(f) Commercial self-regulation

It is an open question as to when purely commercial interests would find a profit incentive to pursue a strong reputation for quality or even seek collectively to assure standards. In certain circumstances business associations are able to substitute for or complement the state in solving collective action problems, including setting standards for member firms. The performance of these kinds of roles is most likely to be possible when markets are competitive, encouragement is provided by government and the association itself has a dense membership, offers firms selective benefits, and can mediate firm conflicts over interests (Doner & Schneider, 2010)*.

(g) Generalities

The larger conclusions to draw from the multiple studies on incentives for effort are that poor consumers *can* use their purchasing power to incentivise quality performance from service agencies *if* they receive clear signals as to which are the good providers. This power can be enhanced through conditional cash transfers to the poor for their use of specific services (Eichler & Levine, 2008)**. Generally, however, it is easier for organisations than individuals to provide the appropriate mix of monitoring, incentives and signals. Client awareness of how well a service provider is performing is not automatic; mechanisms that are more effective at signalling good processes and outcomes are more likely to achieve this result. In almost all cases, however, it takes time for clients to learn to read and trust the signals sent by good performers and this implies the involvement of service organisations willing to invest in long-term results rather than immediate returns.

7. MICRO-INSTITUTIONS: ACCOUNTABILITY

The preceding discussion of incentives has focused largely on those that are provided by individual consumers and/or donors and mediated through the market. To use Albert Hirschman's famous dichotomy, they are based on the client's 'exit' [refusal to purchase] rather than 'voice' [participation in governance] (Hirschman, 1970). What is the evidence about the effect of accountability to clients that is *not* mediated by the market, in other words ones that involve citizen 'voice' -- either local groups, decentralised governments, the regulatory processes of the state, or other aspects of the institutional context.

Accountability entails the identification of responsible actors, the presence of information, and rewards or sanctions (Brinkerhoff, 2004; Collins, Coates, & Szekeres, 2008)*. As with other aspects of regulation and the assurance of service quality, accountability is highly dependent on social context and is likely to evolve most effectively out of the institutional history of the society.

(a) Decentralisation

What forms of decentralised accountability strengthen the performance of development services? To answer this question we need to look at the different dimensions of decentralisation as follows:

(i) *Devolution:* In general, devolution of the governance of development services to elected community bodies or user groups has produced weak results, most especially where there are marked local inequalities or patronage (D. K. Leonard & Marshall, 1982)**. There is evidence for this proposition for general, multi-purpose local governments (Crook & Sverisson, 2003; Harriss, 2001)*, health services (Berlan & Shiffman, 2011)^** (Balabanova et al., 2011)**, agricultural producer cooperatives (Kherallah & Kirsten, 2002; Peterson, 1982)** (Hyden, 1973)*, veterinary services (Catley et al., 2004; Peeling & Holden, 2004)** and school committees in East Africa (Acemoglu, et al., 2006; Banerjee & Duflo, 2006)^**. The places where devolved institutions have had a positive impact are those in which the communities themselves are relatively egalitarian, especially where they are instruments for the villagers to overcome their relative inequality with the *larger* society (Bardhan, 2002)**.

Table 4A. Micro institutions shaping service markets with information asymmetry: *Accountability*

Institution (& section of discussion)	**Actor(s) initiating/ upholding**	**Observed effect of institution**	**Sector**	**Region**	**Type of evidence**
Devolution (7ai)	State, society	-	A, C, E, H, V	AL, AF	3^**, 5**, 3*
Deconcentration with participation (7aii)	State, society	++	E, H	AL, AF, LA, SE	6^**, 2**, 3*
Participation under equality (7b)	Providers, society	++	E, H, O	AL, AF	1^**, 4**, 1*
Participation under inequality (7ai, 7b)	Providers, society	- -			
Published performance information (7c)	Providers, society	+	H	AL, CA	2^**, 1*
Path dependent solutions (8)	State, society	++	H	AF, EA, LA, SA	4**, 8*

See notes at Table 1A.

Table 4B. Micro institutions shaping service markets with information asymmetry: *Accountability*

Study	Sub-section of discussion	Sector	Region
Rigorous systematic reviews (including studies using experimental methods)			
Acemoglu, Kremer, & Mian, 2006	7a	H, E, C, O	AL, NA, EU, OC, EA
Banerjee & Duflo, 2006	7a	C, H, E, O	SA, AF
Berlan & Shiffman, 2011	7a, 7c	H, O	AL
Molyneux et al., 2012	7b, 7c	H	AL, EU, NA
Peters et al., 2009	7a	H	AL
Rassekh & Segaren, 2009	7a	H, O	AL
Peer reviewed literature surveys supported by several empirical studies			
Balabanova, Mills, & McKee, 2011	7a, 8	H, O	AL
Bardhan, 2002	7a	C, H, E	AL
Catley et al., 2004	7a	V	AF
Edwards & Hulme, 1996	7b	O	AL
Eichler, 2006	7a	H	AL
Hansen et al., 2008	7c	H	CA
Ibrahim & Hulme, 2010	7b	O	AL
Kherallah & Kirsten, 2002	7a	A, O	AL
Peeling & Holden, 2004	7a	V	AL
Peterson, 1982	7a	A, C, O	AL
Rose, 2006	7b	E	AF, SA
Single high quality pieces of research (judged by the standards of the relevant discipline)			
Bratton, 1989	7b	C, O	AF
Brinkerhoff, 2004	7	H, C	AL
Collins, Coates, & Szekeres, 2008)	7	H	AL, EU, OC, NA, EA
Crook & Sverisson, 2003	7a	C	AL
Ford et al., 2009	7a	H, O	SE
Harriss, 2001	7a	C	SA
Hyden, 1973	7a	A, O	AL
Leonard & Marshall, 1982	7a	C	AL
Loewenson, Rusike, & Zulu, 2004	7a	H, O	AF
Mliga, 2000	7a, 8	H	AF
Spicer et al., 2011	7b	O, H	AL

(ii) Deconcentration: The forms of decentralisation that seem most effective are ones in which the local operational unit is not elected but has considerable managerial autonomy (i.e., *deconcentration*) combined with strong client participation (Berlan & Shiffman, 2011; Rassekh & Segaren, 2009)^** (Balabanova, et al., 2011)**. Thus the health facilities in rural Tanzania that showed the highest quality were those that were

responsible for their own personnel and finances (Mliga, 2000)*. And in Kenya experiments with incentives for primary school teacher performance had poor results when managed by headmasters who had no control over other aspects of personnel or finances but did work when secondary school scholarships were offered for students who did well on the national exams. The implication is that this benefit provided a strong incentive to pupils and parents who then both put pressure on teachers *and* joined with them in mutually reinforcing co-production (Acemoglu, et al., 2006; Banerjee & Duflo, 2006)^**.

Put more generally, the strongest incentive effects are in the behaviour of users both as consumers and *co-producers* of value, as mediated through professionally managed organisations (Eichler, 2006; Peters et al., 2009)^** (Eichler, 2006)** (Ford et al., 2009; Loewenson, Rusike, & Zulu, 2004)*. Thus, oversight by community organizations can improve health services quality and make providers more responsive to consumers/recipients. Berland & Shiffman (2011)^** find that while practices that increase responsiveness towards other actors rather than consumers (e.g., central government) can decrease the quality of services, innovations that increase community participation (e.g. through community health boards and grassroots committees) and enhance consumers voice and information can actually improve service quality as perceived by consumers

b) Effective community participation

However, some ways of involving communities seem to be more effective than others, and their success in improving outcomes is dependent on a variety of factors, including the 'design' of the group and the context in which it interacts. Some of these factors are, for example: (i) the selection, composition and general functioning of groups; (ii) relationships between committee members, service workers and service managers; and (iii) the broader government context and socio-cultural norms (Molyneux et al., 2012)^**. Community organizations that respond to a felt local need, rather than to one imposed by external actors are more likely to have positive results. In communities "where there are sharp divisions based on ethnicity, wealth, gender and power and where treatment seeking involves very contrasting 'traditional' and 'modern' health care, the applicability of community participation as envisaged through donors and governments can be called into question" (Molyneux et al., 2012)^**. See also, (Rose, 2006)**.

The assessment of national NGOs as instruments of accountability is mixed. Certainly civil society is not *necessary* to poverty reduction, as there are authoritarian systems that have achieved it. Nonetheless, there are settings in which NGOs have played an important role in advocacy for the poor. For example, BRAC has impressive achievements in Bangladesh. Concerns remain, however, about whether most NGOs are not too elitist and/or donor dependent, compromising their ability to be agents of *empowerment* for the poorest (Bratton, 1989)*. The greater the degree of inequality in a society, the more elitism would be a matter for concern (Edwards & Hulme, 1996; Ibrahim & Hulme, 2010)** (Spicer et al., 2011)*

(c) Information

Public disclosure of information, consumers' access to information a*nd awaren*ess of patients' rights, all appear to be powerful mechanisms for improving provider performance and health outcomes. For example, provider performance reports and report cards have potential to enhance responsiveness to consumers, and also increase consumers' choice and ability to dialogue. Although not many reviews assess the impact of report cards, there is some evidence showing that they can contribute to improved provider performance (Berlan & Shiffman, 2011; Molyneux et al., 2012)^** (Hansen et al., 2008)*. However, their effectiveness depends on design. Specifically, the form of information matters: "consumers ignore raw data and must be presented information in ways that are relevant, comprehensive and credible" (Berlan & Shiffman, 2011)^**.

8. PATH DEPENDENCIES

At many points in our analysis we have noted that unique sets of indigenous institutions have helped particular countries overcome their asymmetric information problems. These institutions have derived from particular historical path of development of each society. Countries, such as India and Pakistan, that have not yet discovered such facilitative institutions in their cultural heritages struggle with providing the quality of professional services their citizens seek. Christian missions in Africa, BRAC in Bangladesh and a reformist state in northeast Brazil are well-documented examples of at least partial institutional solutions. We discuss all of these cases, chosen to reflect the variety of path dependencies that are found in LMICs.

(a) China

China, has a number of features that are unusual among LMICs. Econometric analysis of the institutional determinants of a country's health status identifies transition from Communism as a *negative* influence, due to disruptions in the health care system (Knowles & Owen, 2010)*. In contrast the experience of post-Mao China has shown gradual transformation and *improvement,* even if medical costs have risen rapidly. This seemingly anomalous positive result can be explained through path dependency in ways that are consistent with the conclusion that quality is enhanced if incentives are managed by values-led organisations rather than paid directly to individual practitioners.

All facilities in China are dependent on fee income to supplement government funds in order to pay adequate compensation to their better professional staff. Fee income is aggregated at the level of the medical facility, not the individual, and is used by its management to provide incentives to its professional staff (Bloom, 2011)*. Both of these two attributes are the same as observed in the better missions in Cameroun and Tanzania (K. L. Leonard, 2009; Mliga, 2000)*. In contrast, user payments to

government providers in India and Africa are frequently informal in nature, and go directly to the individual. The Chinese pattern has had a mixed effect. Hospitals rely heavily on the income they generate from patients and they have strong incentives to provide an increasingly costly style of care dependent on the sale of pharmaceuticals and use of diagnostic equipment. On the other hand, these facilities have remained in government ownership and they are under pressure to demonstrate that they contribute to government health targets (Pei & Bloom, 2011)*. For example, when the government announced a policy for reducing maternal mortality, some hospitals subsidised outreach work from their own revenues, contributing to substantial improvement in maternal health. Hospital performance is, therefore, strongly influenced by the way managers balance these competing pressures and reflect this balance in the design of salary bonus schemes.

China tolerates a considerable amount of corruption but it punishes harshly those who are charged. Indeed, there have been periodic, severely punitive anti-corruption campaigns since the early 1950s (Schurman, 1973)*. Those who violate Communist Party standards on quality in the pursuit of private gain know that they are taking a risk of severe punishment (Bloom, 2011)*. All health facilities are required to sign an ethical code and their behaviour is monitored. There are also examples when a person's death in a rural medical facility suggested possible neglect or incompetence and her/his village descended on it *en masse* and demanded compensation (Bloom, 2011)*.These examples suggest an implicit, culturally embedded set of regulatory and tort institutions in China that is much stronger than those found in most other LMICs.†

Finally, when China disbanded its communes it distributed land equally among their peasant members. Thus the rural poor in China have land and have the ability to deal with the costs of a modest adverse event (Conning & Udry, 2007)**. In addition, most rural families have one or more members who are working in the city, adding to their ability to pay modest medical fees.

Table 5. Path Dependency Studies

Study	Sub-section of discussion	Sector	Region
Peer reviewed literature surveys supported by several empirical studies			
Balabanova, Mills, & McKee, 2011	8c	H, O	AL
Batley, 2004	8	C	AL
Bebbington & McCourt, 2007	8b, 8e	C	AL
Bloom, Champion, Lucas, Peters, & Standing, 2008	8	H	AL
Conning & Udry, 2007	8a	A	AL
Das, Hammer, & Leonard, 2008	8d	H	AL

Grindle & Thomas, 1991	8e	C	AL
Heredia & Schneider, 2002	8e	C	AL
Leonard, D.K. 2010	8d	C	AL
March & Olsen, 1984	8e	C	NA
Silbermann, 1993	8e	C	NA, EU, EA
Single high quality pieces of research (judged by the standards of the relevant discipline)			
Bloom, 2011	8a	H	EA
Daland, 1981	8b	C	LA
Knowles & Owen, 2010	8b	H	AL
Leonard, K. L. 2009	8d	H	AF
Leonard, K. L. Masatu, & Vialou, 2007	8d	H	AF
Ly, 2000	8d	A, V	AF
Mliga, 2000	8d	H	AF
Pei & Bloom, 2011	8a	H	EA
Schneider, 1991	8b	C	LA
Schurman, 1973	8a	O	EA
Standing & Chowdhury, 2008	8c	H	AL
World Bank, 2008	8e	C	AL

(b) Brazil

Brazil illustrates a very different path to an effective health care system. Through most of the 20th Century the country had notoriously ineffective social services, first because they were used as vessels for patronage and because of neglect during the military period (Daland, 1981)*. The dictatorship did demonstrate, however, that the state could deliver a successful industrialisation programme when that became the military's priority (Schneider, 1991)*. The struggle to bring democracy to Brazil generated a very different set of priorities and generated popular and professional movements that embodied them. Thus the patronage systems of rural Brazil for the first time were confronted with the 'social energy' of socialist political parties and professional reform movements to deliver improved government services to the poor (Bebbington & McCourt, 2007)**. These were achieved through significant public sector reforms in health and other services for the poor in parts of Brazil's north-east (Tendler, 1997)*. There are two lessons here. On the one hand, it was possible to overcome a 'marketised' state system and achieve reforms that produced effective government institutions. On the other, this was achieved during a quasi-revolutionary period of 'social energy'. Significant progressive change can be institutionalised in the structures of 'undergoverned' states, but it emerges from periods of exceptional 'social energy,' not routine politics or administration (March & Olsen, 1984)**.

c) Bangladesh

Bangladesh had seriously deficient government services at the time of its separation from Pakistan, problems that have persisted to this day. BRAC, for example, was one of the NGOs that emerged to confront this crisis in services and development. Starting with the provision of credit to rural women it was able to build a strong relationship of trust with the poor, so that today it is a dominant player not only in that field but in primary education and health, despite being a fee-charging (albeit subsidized) institution and the state provides a minority of curative health services (Balabanova, et al., 2011; Standing & Chowdhury, 2008)**

(d) Kenya and Tanzania

Kenya and Tanzania are examples of a quite different type of solution to the asymmetric information problem. Both countries significantly expanded health and education services after their independence in the 1960s. Tanzania underwent a period of progressive 'social energy' while Kenya did not. But both preserved the remnants of the mission-based educational and health systems and while subsidising them also permitted them to charge user fees. We have good evidence in health that these value-based NGOs were sufficiently well-institutionalised for their dependence on market income to produce health services that on average were better than those of government clinics (K. L. Leonard, Masatu & Vialou, 2007; Mliga, 2000)*. In other words, in these and other African countries path dependence led to the continuation of an institution that provides a good solution to the problem of assuring clients that they are getting the quality of service for which they believe they are paying (Das, Hammer & Leonard, 2008)** (K. L. Leonard, 2009; Ly, 2000)*.

(e) Generalities

The institutional solutions the above five countries have found for overcoming the asymmetric information problem are very different from one another. They carry some features that are recognizable in the literature we have reviewed in the preceding sections and can be explained with general theory. But the specifics were made possible by the particular path of institutional development each country has traversed – paths rooted in their social histories and political economies.

We want to emphasize the use of the adjective "institutional" in the preceding paragraph. The mechanisms and societal features that were able to produce improved outcomes in each case were embedded in that country, that is, they were institutionalized by having come to be valued for their own sake and therefore had staying power and social efficacy. Too much of the literature evaluating various mechanisms for managing professional service delivery takes no account of whether they have achieved institutionalization. Indeed a single country *experimental* study design *cannot* test for the consequences of a mechanism's social embeddedness,

because it cannot be manipulated randomly. This does not invalidate the evaluations of these design and policy features, for those things that work well before they have become institutionalized are most likely to survive long enough to become socially embedded and therefore still more effective. But this process does re-emphasize the importance, in making policy and implementation decisions about professional services, of taking advantage of a society's existing institutional repertoire of institutions and of working with rather than against them.

9. CONCLUSIONS

The important conclusions to draw from this review of the literature are:

01. The quality of services offered to the poor in undergoverned LMICs is frequently seriously deficient.
02. In undergoverned countries it is better to focus on the nature of the *markets* for health and development services rather than on the public and private *sectors.* It is common in such LMICs for informal fees to be charged in the public sector and for a very substantial proportion (if not a majority) of services to be bought in a private sector that varies widely in quality and profit motive. In these settings the so-called 'public' and 'private' sectors are interpenetrated and often face the same institutional issues *within* them.
03. The poor have more knowledge about the quality of the services on which they rely than is generally recognised, but this information could be enhanced considerably through societal institutions that help them solve the information asymmetry problem they face.
04. The likelihood of social institutions that mitigate inequalities in knowledge about the quality of services increase with GNP per capita, education, good governance, and 'social capital' while they decrease with inequality and patronage.
05. Most of the world's poor live in LMICs in which they can and *do* invest modestly in the purchase of needed services and can be seen buying from higher cost providers in the face of catastrophic events when they judge that their quality is necessary, particularly, we hypothesize if they have land or some other collateral asset., This in no way invalidates the case for subsidies for services for the poor. Recognition of the reality of client payments, however, prompts a recognition that most LMICs do have resources in their societies that could be spent more effectively to create stronger incentives for service providers and greater gain in health and other development outcomes *if the market imperfections caused by information asymmetry could be overcome*.
06. Hence the priority is to develop a set of institutions in the society that enable quality in competence, effort and accountability to be rewarded and signalled.
07. In societies with high levels of governance, the state usually plays a central role in providing institutional solutions to the problems of information asymmetry. It is very often unrealistic and counter-productive, however, to expect government to be the principal provider of individualisable ('private') health and development goods for the poor in countries with low levels of governance and

poorly developed paths for public sector improvement (that is, in the weakest or undergoverned states). Nonetheless, even in these settings most often the state is observed to play a role in planning for, facilitating and subsidising institutional solutions by non-governmental actors and to ensure the provision of services that have important 'externalities' (such as disease prevention, surveillance and control). For, 'private' goods, pathways to the effective involvement of the state in solving problems of information asymmetry will differ on the basis of the administrative capacity and governance arrangements of local and national governments, the kinds of partnerships that exist between the state and other stakeholders and the degree to which the political system represents the needs and aspirations of the poor.

08. In undergoverned countries the most effective institutions serving the poor generally will be developed in organisations rather than by individual practitioners, as the former are more likely to be able to overcome the asymmetric information problem.
09. In many societies the organisations that are most likely to invest in the creation as well as maintenance of quality reputations are those that have 'other regarding' initial institutional values.
10. These organisations also are likely to perform best if their local professional staff have decentralised control of their personnel and financial management (deconcentration), under the eye of client participation.
11. As there are multiple ways to provide incentives for quality and to signal them to potential clients, those trying to stimulate higher quality should invest in the paths to these institutions that are most consistent with a society's other existing institutions.
12. These conclusions about institutional solutions to the asymmetric information problem apply not just to health services but to those for education, veterinary medicine, agricultural credit, and probably others as well.

Different social institutions for providing and signalling incentives for quality in competence, effort and accountability have been found to be effective in dissimilar settings. The evidence suggests that macro contextual factors such as cultural norms and values matter for service outcomes, particularly on how they determine the performance of community accountability mechanisms, on how they shape provider-recipient relationships and in the repertoire of well-performing organisations (including government) available (Berlan & Shiffman, 2011; Molyneux, et al., 2012)^**. It is *possible* that some of them are universally more effective than others. But because such institutions tend to be a cultural attribute of a country as a whole (as missions are in Africa, for example), the evidence for judging such relative effectiveness does not exist and would be difficult to collect. More important, such institutions generally are shaped in a path dependent manner – that once moderately effective institutions are established in a society the costs of changing to another set are too high to be worth the effort (Bloom, et al., 2009)**. Thus improvements in the quality of services offered to the poor in LMICs are most likely to be found by using, extending, and reforming the particular institutions a country already has, rather than attempting to import some allegedly universal 'best practice'.

The evidence in support of these conclusions has been detailed throughout the text and summarized in the tables. By combining the observations made in studies of professional services for the poor in four different sectors, we have been able to draw broader and stronger conclusions than others have achieved before. Nonetheless, the nature of the evidence varies between the propositions advanced. In many cases they are supported by randomized controlled trials; in others the character of the variables under examination make careful cross-national regression analyses or systematic case studies the only feasible methods; and there are some areas where the evidence is still mixed or weak.

Appendix: Methods

1. Scope of the review

The search topic was defined as evidence on the effectiveness of mechanisms and institutions governing professional health and development services in poorly-governed (or' undergoverned') low and middle income countries.

The development sectors included are human and veterinary medicine, education and agriculture (mostly credit aspects of it). In the introduction of the paper we present a justification of the inclusion of these sectors and not others.

The questions guiding our systematic search and review of the empirical literature were the following:

- What institutions have been used to mediate relationships among service providers and recipients?
- How are these institutions helping to assure recipients of the quality for which they believe they are paying?
- What is the evidence of the effectiveness of such institutions in different LMIC contexts, particularly 'undergoverned' ones?

2. Search methodology

We used these questions to guide our selection of search terms and through an iterative process we added more terms after reading and analyzing the first reviews found. The general structure followed for each search string was formed by the terms: Review AND Sector (Health, Education, etc) AND Mechanism (e.g. Franchise) AND Region AND Outcome (e.g. Quality of service).

Table A1 presents an example of the search string used for Medline. The selection of hosts and journals was guided by the aim of reaching not only health literature, but also education, economics, development studies, public administration and veterinary literatures. Published, grey and unpublished literature was systematically searched. Table A2 presents a list of all the sources and databases used.

The search strategy included indexed and free text terms, starting with the term "review" combined with boolean "AND" with the sector (health care, education, agriculture, veterinary medicine, credit) and the institution or mechanism (institution, partnerships, community, regulation, governance, faith based, non-state actors, public-private partnerships, market, franchise, decentralization, sanctions, information disclosure, pharmaceuticals, results-based management, pay for performance). Additionally, terms related to our theoretical framework were also included (e.g. moral hazard, information asymmetry, incentives, adverse selection) as well as implications of institutional

arrangements (e.g. accountability, legitimacy, trust) and outcomes (quality of service, access for the poor, malpractice).

The search was also limited by geographic location, with the aim of capturing evidence from low and middle income countries. Again, for this aim we used indexed and free text terms: Developing countries, low and middle income countries, Latin America, Asia, Africa, third world countries, underdeveloped countries, and less developed countries.

The time bound was restricted to studies published after 1999. Of course, some of these surveys covered research done well before 2000, so the dates of empirical studies effectively are unbounded.

The review covers only studies published in English. We were capable of searching in French and Spanish as well but were dissuaded as the vast majority of the reviews we were looking for are in English.

3. Inclusion criteria

We first looked for Systematic Reviews, and then prompted by the Realist Review critique (Pawson et al, 2005), we widened the criteria to include other comparative reviews that met the standards for quality of the respective social science disciplines. The strategy was to include the best evidence available (and not to fall into the statement 'we know nothing', so common in systematic reviews).

Only when a key topic had not been addressed in a review article did we do searches for individual articles.

The premises underlying the paper are that an adequate discussion of the institutional challenges underlying professional service delivery in poor countries required that we go beyond the standard systematic review methods but that in doing so we should make the varying qualities of the evidence transparent.

We accepted the methodological standards applied by peers in the sectors and social science disciplines in which the surveys were published. At no time have we excluded from our discussion any of the findings in the surveys our searches uncovered nor in the studies cited by them. Unlike the standard 'systematic review', however, we have supplemented the findings uncovered by our surveys with other individual studies of which we were aware when they would help to frame or extend or fill gaps in survey findings. This was particularly important given the range of sectors and disciplines on which we were drawing, for the range of surveys varies between them and in many there is a bias against research reported in books. We want to stress, however, that these additional materials were never used to contradict the empirical findings presented in the surveys and are clearly identified in our references. All of the types of evidence cited were read by at least two authors, always including Leonard.

Because we have been particularly inclusive with regard to evidence, we have made a

special effort to be transparent about its character. In this article, evidence which takes the form of a rigorous systematic review (including studies using experimental methods) is annotated with ^**; evidence from a peer reviewed literature review supported by several empirical studies is denoted with **; and evidence which derives from a single high quality piece of research (judged by the standards of the relevant discipline) is annotated with *. Articles with less substantial evidence bear no annotation and those that advance a probable but weakly evidenced hypothesis are annotated with a †. In addition in the summary tables we show the service sector and the region from which the evidence is drawn. An orthodox systematic review will have located at least a thousand relevant articles of highly variable quality. A critical aspect of such reviews is the criteria that were used to exclude the weaker articles. Because this article is first and foremost a review of reviews we do not have exclusion criteria. We have accepted the standards of the sector and discipline of any peer-reviewed literature survey our searches found and thus have automatically included any evidence that comes from them. These surveys are designated as ^** or ** in our text and tables. Some critical aspects of institutions have not received reviews, however, or key steps in the links between pieces of evidence have not been provided. Rather than implying that we know nothing about these issues, in these circumstances we have cited high quality articles or books of which we authors were aware (and designated them by an *). For these latter references the standards of inclusion (and thus of implicit exclusion) were those of at least two of the authors.

Table A1: Example of search string used for Medline

1	Review (Mesh)
2	Delivery of Health care (Mesh)
3	Private Sector (Mesh)
4	Public-Private Sector Partnerships (Mesh)
5	Consumer participation (Mesh)
6	Social marketing (Mesh)
7	Accountability (Mesh)
8	Decentralization (Mesh)
9	Government regulation (Mesh)
10	Malpractice (Mesh)
11	Information Dissemination (Mesh)
12	Pay for performance (Mesh)
13	Review AND (2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12)
14	Review AND (health care or healthcare or private or non-state actor* or franchis* or faith base* or communit* or market* or accountability or legitimacy or partnership* or decentrali* or institution* or regulation* or sanction* or malpractice or information disclosure or pay for performance or pay-for-performance)
15	13 OR 14
16	Developing countries (Mesh)
17	Latin America (Mesh)
18	Africa (Mesh)
19	Asia (Mesh)
20	(less* developed countr*) OR (third world countr*) OR (under developed countr*) OR (underdeveloped countr*) OR (developing countr*)
21	(low income countr*) OR (low income nation*) OR (middle income countr*) OR (middle income nation*) OR (low and middle income countr*)
22	16 OR 17 OR 18 OR 19 OR 20 OR 21
23	15 AND 22
24	Quality of health care (Mesh)
25	23 AND 24

Note: We also conducted the search string without the term “review”, in order to capture non-review studies.

Table A2: Sources

Search engines/hosts:	- Science Direct - MedLine - JSTOR - EBSCO
Systematic review websites:	- The Cochrane Collaboration, The Cochrane Effective Practice and Organisation of Care (EPOC)
Specific Journals:	- Lancet, World Development, Journal of Economic Perspectives, Social Science and Medicine, and Tropical animal health and production
For grey and unpublished literature:	- World Wide Web (Google and Google Scholar)

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