

Supply and demand mismatches in training: Can anything be done?

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The main difficulty with vocational training is that what is taught is not necessarily what employers need and students want. Yet the discrepancies tend to persist without any perceptible efforts being made to correct them. Researchers have been denouncing these mismatches for a long time.¹ So have international organisations like the ILO, the OECD and the World Bank.

Most of the criticism directed against vocational training results from the chronic tendency of trainers to work at cross purposes with trainees and their potential employers. Many governments are well aware of the problem, and administrators constantly urge training institutions and schools to adjust to market demand by all possible means.

In reviewing the work of training institutions and schools in a large number of countries we found that trainers and administrators often do not have the faintest idea of what happens to their graduates. How can they make adjustments if they do not know that something is wrong? They need an information system to tell them when they are off the mark and in what way. They need tracer studies, and they need better statistics.

We pursued our inquiries along these lines, but eventually started wondering about the premises from which we had started. Why would trainers want to be efficient? Why would they want feedback on former students? Why do they persistently fail to adjust supply to demand? Are they idiots? Is their behaviour irrational? At this stage we reached a turning-point in our thinking.² We were looking at society's interests. We wanted administrators to respond to social needs, but this is not how the real world operates. The logic of decisions has to be understood from within bureaucracies. The rules of the game are defined inside organisations. The outside world conditions and constrains but does not determine the incentive systems that influence administrators.

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¹ A classic article on mismatches in the developing world is that by Philip Foster: "The vocational school fallacy in development planning", in C. A. Anderson and M. J. Bowman (eds.): *Education and economic development* (Chicago, Aldine, 1965).

² The main source of inspiration for this shift in our thinking is the work of A. Wildavsky. See, for instance, his *Speaking truth to power* (New Brunswick, Transaction Books, 1987).

Trainers are not collectively stupid. If they ignore information, if they disdain tracer studies, even when available, there must be reasons. This article reflects the result of our search for these reasons and, later on, for ways to bring training output in line with demand.

1. Why the chronic mismatches?

Our focus is not on the long-run engineering of training systems but on shortcomings in their everyday operation. Even when good planning manages to balance supply and demand effectively, as time goes by errors emerge and things do not evolve as expected. Even the best planning calls for adjustments of course, and every society needs mechanisms to correct the compass bearings of its institutions. Over time it matters less whether planning has hit or missed the original targets; what really counts is the ability of the system to keep searching for the right direction. The faster the economy moves, the more vigorous such adjustments need to be.

Incentives and sanctions

The main thesis of this article is that in making ongoing adjustments the crux of the matter lies in the incentives and sanctions system. The logic of the system must be that it makes sense for participants to move in a socially desirable direction and to enhance the effectiveness of training. Those who are in a position to decide whether this happens, and those who can help or obstruct the process, must receive either positive payoffs for moving in the right direction, or sanctions for not doing so. If correcting course entails political costs, hardships, risks of losing one's job or endangering one's career, the positive payoffs for doing so must be large. Otherwise, why bother? No society can rely on the idealism of its managers, day after day, to make decisions that could be detrimental to their status and prestige. No society can move ahead when its administrators are punished for doing things that need to be done (deciding what needs to be done is a different issue). Yet our contention is that such is very often the case and this is why training systems display so many problems of mismatch.

We may start the discussion with a metaphor. Markets that resemble the perfect competition model reveal coherence between social and individual needs. This is a basic proposition in neo-classical economics. The man who sells ice cream in the street gets a correct and forceful feedback when his ice cream does not taste good or is too expensive: people will not buy it. Unless he improves the quality of his product or reduces the price, the threat of bankruptcy is real enough. The logic of the perfect competition model is that in the long run, when everybody responds by producing what consumers want, society is better off. The challenge is to make our training systems respond just like that.

Clearly, training systems do not operate in conditions even remotely similar to perfect competition and there is no way to transform them so that they will. For our purposes, the perfect competition model serves as an ideal to bring home the idea of incentives and sanctions that will make supply respond to demand, but in no way are we implying that all training should be regulated by market forces.

What we need is an incentive system generating signals that make it *individually* desirable for those who intervene in the decision-making process to act in ways that are *socially* desirable. That is to say, to gain – not necessarily in money terms – by doing what is good for society.

We can illustrate the point by taking the example of a typical state school of the Third World (we are not referring here to technical or vocational institutions). It usually offers an education of poor quality, a fact that is no secret to government, teachers and parents. But who could put things right? Ministers and education authorities can preach, lecture, legislate profusely and give orders. Yet experience shows that they seldom have any real impact on what happens inside schools. In most cases, the only person with the power to change things is the school principal.

What then should the principal do? It is easy enough to offer recipes: Get rid of bad teachers, push others to greater effort, make students work harder, enforce tougher academic standards, even if some students flunk and drop out. These policies are sure to boost quality, and they may be within the principal's authority.

But let us look at the other actors involved, many of whom have the power to obstruct or veto such changes. Faculty staff have to put in more effort and some will be dismissed. Teachers' solidarity may be high and unions adamant, creating ill ease and tension, if not confrontation. Students, by the same token, have to work harder and some will fail, creating a group of disgruntled parents. The Ministry of Education has ample retaliatory power over principals and may come under pressure from infuriated parents. Defusing a crisis is always high on the agenda of Ministers.

By contrast, the improvements in quality are hard to measure and bring no immediate or tangible advantages to anybody. Employers in less advanced countries seldom attach much importance to the quality of education of the people they hire. In short, principals of state schools will suffer considerable political losses from all sides if they try to introduce changes and will secure no obvious benefits in return.

Compare that situation with the case of private "crammer" courses (known as *cursinhos*) taken by university-bound secondary students in Brazil. In order to enter higher education, students have to pass an elaborate and technically well-designed multiple-choice test. Results are published in the local papers, which report both the scores achieved and the proportion of successful students from a given *cursinho*. The better crammer schools publish entire pages of advertisements in the newspapers with the names of their students who passed. The very teachers who would otherwise drag their

feet, and the very students who would protest, now have a very good incentive to support the principal's efforts. Teachers are rewarded with generous salaries if they perform well (as measured by the computer of the institution that grades the test). The principal – and the owner of the school – has a strong incentive to pursue quality (as defined implicitly by the test), and obstruction from other actors in the system is not likely to occur.

Whatever one may think of the university entrance examinations, and not all of it is positive, they do give a very distinct signal to the education system. The schools that cater for students who aspire to higher education never fail to respond to these stimuli, no matter how controversial the notion of quality implied by high scores in the tests.

So while the principals of many regular state schools will do very little to raise quality standards, those of the *cursinhos* will go to great lengths to improve the measured results of their students. These simplified examples illustrate the point we are driving at. If decision-makers stand to lose by moving in a given direction, they are far more likely to do nothing. We certainly cannot count on them to act out of unrewarded idealism.

Vested interests

It is our contention that what is true of the ordinary school system holds true for vocational training too. For various reasons, training systems often fail to respond to market needs: they offer the wrong courses or produce the wrong graduates and show no signs of wishing to put things right. Inertia is the rule.

As in the regular school system, instructors, principals and administrators develop strong vested interests in courses of study that are being offered in their institutions and see no need to change them. Such persons constitute potential lobbies that will fight bitterly for their perpetuation, regardless of social need (as defined, for instance, by the employability of the graduates in suitable jobs). Why would the principal of a vocational school want to engage in a crusade for change? Only, like his counterpart in an ordinary school, if he has something to gain from it or if the losses suffered by not campaigning are even greater than those he risks by doing so.

It may be worth defining what is meant by gains or losses. A financial gain is the most obvious reward. But power, prestige and, ultimately, not being fired or demoted are just as important motivators of managerial behaviour. It should also be remembered that principals and administrators are members of a relatively cohesive reference group. They derive their sense of achievement or failure from their acceptance within the group. Very frequently, change requires action that can be interpreted as betrayal of the group ethos.

The predicament of many training systems is that the rewards for correcting course are not large enough to offset the penalties incurred by

confronting vested interests in the status quo. We can see this happening in all countries, be it Sweden, Costa Rica or the poorer African countries. If we want to understand the reasons for inertia, the first question to ask is who gains and who loses from the refusal to seek a better fit between supply and demand in training? The obvious answer is that usually the school bureaucracy and staff stand to gain, at least in the short run, while trainees and employers stand to lose. Why then do those who suffer from the consequences of this inertia not impose their wills upon the schools? For the same reason that their views are not forcefully conveyed to the decision-making centres. Employers are far away and have little contact with the schools. Students often find that they got the wrong training only after they have left the institution.

2. How can we improve the fit between supply and demand?

Making training responsive to students' needs

Theoretically, students constitute a force for moving training systems closer to their needs. They are on the spot and have the potential to create politically unpleasant nuisances. But in practice they are often unorganised, without a political voice and not very well informed. Some training institutions frown upon student participation. Large and powerful public institutions can easily ignore students' aspirations and demands.

One factor that diminishes the potential usefulness of student activism is the direction it all too often takes, alienating public opinion. Regrettably, students are organised to protest against increased cafeteria prices rather than against obsolete or inadequate curricula. Nor do school administrators go out of their way to elicit student participation in more productive directions.

With private institutions the matter is quite different. These react very quickly to students' demands unless, of course, they imply additional expenditure or the students ask for lower tuition fees. Such issues can be taboo and management will in general discourage styles of student organisation that strengthen their negotiating position. But it is in the nature of private institutions – whose clients are free to enrol and pay if their wants are provided for and to vote with their feet if they are not – to keep close track of students' preferences.

All the same, it has been observed that what students want is not necessarily what the market is looking for. In other words, consumer sovereignty has to be properly understood. Responding to their immediate clients, the students, is not tantamount to responding to the ultimate demand from those who will use the skills acquired. Students can be completely wrong in their perceptions of market demand. In addition, they want things

other than skills. They want status, they want high-prestige occupations and they do not usually want to overburden themselves with work. This being said, students usually steer training systems in the right direction if they have some say in decisions; but in most cases they are ignored.

More power to employers

Ultimately, employers are the ones who decide on hiring. Hence they have the last word on what the market wants: they *are* the market. It is obvious, therefore, that there are all the reasons in the world to make the voice of the employers not only heard, but heard in a way that it is politically unwise to ignore. This is not to say that they are necessarily correct in their decisions or that the pressures they exert on training systems are always pertinent. The essential if hardly original point is that it makes no sense to give people training that is going to be rejected by employers.

The most obvious solution is to place training under the control of a board in which employers are represented and powerful. And in fact most training systems are governed by boards or councils which are required by law to review, comment upon and approve the work programme of their respective institutions. Hence, in theory, employers are given a fair chance of voicing their wishes and ensuring they are met.

However, practice differs considerably from theory. Many boards are too large to be functional, employers having only token representation. Their agendas are often overcrowded with formalistic routines, in addition to being presented to board participants at the last minute. Boards tend to be overloaded with civil servants from various ministries, usually uninformed and unmotivated middle-level bureaucrats. It may even happen that the payment of a substantial honorarium will attract political appointees incapable of making any useful contribution to training policies.

Another common problem is the method of appointment. Sometimes representatives from the business world are appointed by the government. These, for obvious reasons, tend to be very docile board members. For instance, political party loyalty can be the main criterion for appointment to some boards. Bureaucrats from employers' associations may also be less well informed than actual entrepreneurs.

To illustrate these problems we refer to an interview with the main representative of the private sector on the board of a prestigious training institution, of whom it was reported: "Despite having all the means to exert direct influence on the institution's functioning, he did not show any motivation or interest in promoting changes or increasing the effectiveness of the institution. We are still asking ourselves what non-trivial model explains this behaviour." ³

But even when we discount such malfunctions, boards dealing with entire training systems tend to be ineffective. First of all, they often lack real

³ Written comment by Bernardo Kugler, World Bank.

power to vote funds, to veto budgets or to change critical rules and regulations. In the long run weak boards end up with weak representatives, as important administrators send their subordinates to represent them when they realise that little can be accomplished. Secondly, broader slices of the training world are less amenable to being influenced by board members. In countries which have several training systems depending on sectoral ministries and other institutions, it has been observed that the boards of those that have a better focused activity tend to be more successful in bringing them closer to market demand.

Training systems operated by trade chambers or associations of employers generally respond much better to firms' demands. A good example is the Brazilian SENAI and SENAC,⁴ which are formally linked to the Ministry of Labour but are in reality controlled by employers' organisations. They may have other sins but as regards speed of adjustment they are much more responsive. Their decision-makers are much more closely attuned to employers' preferences than are their counterparts in training institutions that are independent or directly run by ministries.

Boards of community colleges in the United States are specific to each cluster of occupations and include a good representation of businessmen and small entrepreneurs. Some Latin American training institutions also have such localised boards or "liaison committees" (*comités de enlace*). By the same token, it has been observed in Sweden that the best functioning boards are those that operate in the individual schools and for each course of study. The boards covering many units or several different occupations were found to be ineffective.⁵

A board representing the various important interests involved is more effective in providing the requisite information on what the market wants, what is going wrong and in which direction it is necessary to move. But experience shows that this information does not travel easily up the organisational hierarchy. If those who have the power to change the way things happen are not confronted directly with the information, or with political pressure for that matter, it is unlikely that much will happen.

Improving the feedback

Experience in Sweden shows that the possibility of implementing changes at the level on which the local sectoral boards operate makes for success in matching supply and demand. If that conclusion is of a more general application, as seems to be the case, it makes a very strong argument for the decentralisation of some decisions in training. Of course,

⁴ *Serviço Nacional da Aprendizagem Industrial (SENAI)* and *Serviço Nacional da Aprendizagem Comercial (SENAC)*.

⁵ Written comment by Mats Hultin, formerly Deputy Director, Education and Population Division, World Bank.

decentralising is often a decision of some complexity, involving many politically sensitive considerations. It also has some equity drawbacks. Yet there seems to be no better way of achieving a realignment of supply and demand.

The relative stagnation of formal markets in developing countries and the explosion of the informal sector do not change the general principle that training has to respond to demand from the productive sector. Yet it is a different demand. Enterprises are often very small and thus not always well represented by any collective bodies. Also, in many cases, self-employment is the major form of economic organisation. Clearly, the strategies for creating incentives that will induce training institutions to respond to the demand of such micro-enterprises tend to be quite different.

The recent tendency for informal sector employers, workers and the self-employed to organise has repercussions that reach beyond training. By forming themselves into groups, such as associations, pre-cooperatives or co-operatives, workers in the informal sector can more easily be reached by programmes, projects and activities designed to help them. Credit, technical assistance, access to markets, as well as training can be facilitated by the establishment of voluntary associations within the informal sector.

As regards training, organising presents many advantages. Firstly, potential trainees are made more aware of their needs and are given the opportunity to express them more clearly; they can also control and evaluate more closely the services received, requesting relevant adjustments when necessary. By these means they play an active role in planning, carrying out and assessing programmes instead of being only a "target group" for activities conceived and implemented by others. Secondly, training suppliers can more easily reach them and take advantage of economies of scale, and thereby reduce costs.

As an example of this participative approach, the local government in Aalborg, Denmark, has created an informal committee that includes the social partners of the city as well as representatives of teachers, parents, youth and government. This committee also acts as a forum to identify problems and initiate programmes. It deals with such issues as youth unemployment in the city, and the role of the press as a communication link between school and work. It also works on specific guidance matters so as to identify vacancies for internships in enterprises and to prepare technical material for vocational and occupational guidance.⁶

In Costa Rica the National Apprenticeship Institute (*Instituto Nacional de Aprendizaje* - INA) has established liaison committees at the subsectoral economic level, with representatives from the economic branches concerned and professionals from the INA. Each committee holds periodical sessions according to a yearly work plan or meets extraordinarily to discuss urgent or

⁶ Commission of the European Communities, Directorate General for Employment, Social Affairs and Education: *Social Europe: Transition of young people from education to adult and working life* (Luxembourg), supplement 5/87.

important matters. The functioning of these committees has allowed the INA to operate closer to the "users" of trained people and to benefit from existing facilities and equipment in enterprises to develop training programmes. At the same time, sectoral employers are given an opportunity to discuss specific training problems and to ask for changes or adjustments if and when needed.

3. Building in the feedbacks

There are many interesting or innovative ways to create better feedback between training output and demand. This section reviews some of the old and new schemes that are being used for that purpose.

Reducing the distance between decision-makers and clients

Distance is an obvious deterrent to good communications. If those who make training decisions (methods, content, how many to train) are physically removed from those who may need the training, the chances of mismatch are much greater.

The tendency to decentralise such decisions, or at least to delegate power to lower administrative levels, seems to be a world-wide phenomenon. Even countries that have a long tradition of training and where dysfunctions were never too serious – like Western Europe – are moving further in this direction. East European countries are also announcing policies to decentralise training.

A related issue is the sectoralisation and specialisation of training institutions. Institutions that cover a very broad range of occupations may be less competent and knowledgeable in any one of them, compared with those that specialise in a narrower range of disciplines. The trend towards the latter could also be considered a form of decentralisation that tends to improve the fit between supply and demand.

Many countries have training centres linked to particular industries or sectors. In Latin America there are different types of sectoral training centres; in some cases they are attached to sectoral ministries. In other countries they have been created by agreements between the central training institute and private sector employers. This is the case of Venezuela where the National Institute for Educational Co-operation (INCE) has established many sectoral institutes. INCE-Construction, INCE-Banking, INCE-Insurance, INCE-Petroleum, etc., are actually autonomous agencies.

There are also sectoral centres linked to the Ministry of Labour, but actually operating as autonomous and private bodies (this is the case of the Brazilian SENAI and SENAC), and training institutions controlled by employers' or workers' organisations. Chile provides perhaps the most important example of the latter category, having transferred most vocational

schools to corporations under the control of sectoral employers' federations. In Mexico there are also some sectoral centres like the Training Institute for the Construction Industry (ICIC) administered by the Construction Chamber, and the Training Institute for the Sugar Industry (ICIA) managed and controlled by workers' organisations.

Experience seems to suggest that sectoral institutions can carry out more specialised programmes than the global training agencies, even when the latter have sectoral departments. Sectoral institutions always keep in closer contact with employers, which makes the feedback from users more direct and reliable.

However, as the Chilean experience shows, putting schools under the jurisdiction of employers may be a necessary but is not a sufficient condition for success. Public vocational schools have been transferred to corporate bodies whose boards are composed of delegates of employers' associations or federations (chambers of agriculture, industry or commerce), but whose administrators may be teachers or similar personnel having weak linkages with actual production or service units.

Employers were asked (sometimes under political pressure from the Government) to take over the administration of the schools. Their response was lukewarm. There is no real management of the schools by employers. Abundance of skilled labour in Chile and a relative over-production of vocational schools have contributed to the lack of interest shown by employers. Having no economic or political rewards, employers have left the schools' administration in the hands of capable teachers, but have provided no additional funding, equipment or other resources to improve teaching.⁷

Decentralisation, delegation and sectoralisation, while welcome moves towards a better fit between supply and demand, are not without potential problems. In economies with a surplus of people willing to engage in white-collar occupations and with a long tradition of bloated bureaucracy, instead of one top-heavy administration we may end up with many. Technically, such cumbersome machinery is not at all necessary, but it takes political will and energy to avoid it. In addition, the larger the number of independent or autonomous institutions, the greater the risk of duplication and waste.

Increasing the flow of information

Training institutions always have something to gain by responding to demand. There may be concrete reasons for not doing so, but in most cases there are vast numbers of small adjustments that will be both acceptable and affordable. Individually, they may amount to little but added together they make a lot of difference. The main deterrent to such adjustments is the lack of information flowing between trainers and enterprises. There is little transparency between supply and demand.

⁷ O. Corvalán: *The problems of matching skill acquisition and employment opportunities in Chile* (Santiago, 1987; mimeographed).

Information systems can be specially developed to reduce this gap and there are no *a priori* reasons for not doing so. Yet it is often more practical and more effective to create other mechanisms that may have their own goals but also a subsidiary purpose of increasing transparency in the markets. Some of these are reviewed below.

Bringing schools closer to firms

Arrangements to bring schools closer to enterprises, i.e. to bring training closer to employment, can be a means of creating a better flow of information and hence a better fit between training and workplace needs.

This idea can be illustrated by many European examples of mechanisms aimed at easing the transition from education to employment. Several countries have programmes combining part-time schooling and a job, or offer working periods in firms, which are integrated into the school curricula.⁸ Internships in enterprises for graduates or students in the last years of secondary or higher education are also becoming common. Many countries have set up compulsory systems of internship, especially for students from technical schools.

Without doubt, these are useful schemes. Nevertheless, some distortions have been detected, particularly in developing countries. The most usual is the tendency of many enterprises to use interns as "cheap labour", assigning them to jobs which are not linked to the kind of education or training they have received and making them perform repetitive tasks that do nothing to develop or improve their skills.

This problem tends to occur when the training institution does not have a special service in charge of following up the interns. Experience shows that it is necessary to monitor and assess the programme, keeping in touch with interns, discussing difficulties and trying to solve their problems with the firm.

Training-cum-production is a very useful means of bringing schools closer to the real problems of enterprises. By combining training with the production of goods and services at the same time and place, schools can better integrate theory and practice, motivate students to learn by doing specific and useful things, and create income for the school or for the students and their families.

By operating real or mock firms, schools and students become more aware of what life outside school is about. Trainers do not have to leave school to see the gaps between their teaching and what is needed in the everyday operation of business firms. Producing in schools is more often found in socialist countries, where the schools and the students, especially from secondary level upwards, often combine learning and productive

⁸ J.-P. Jallade: "The transition from school to work revisited", in *European Journal of Education* (Abingdon), 1985, Vol. 20, Nos. 2-3.

activities. In market economies these schemes are restricted to agricultural schools or establishments catering for poorer students.

It is very difficult to maintain the delicate balance between learning and producing. Training may suffer as production goals have to be met. Students may produce much and learn little. Alternatively, revenues derived from the school's production may be too low. In many cases they are not sufficient to cover the school's recurrent costs or to provide enough income for poor students and their families. Related to that are difficulties in marketing the school product.

Less widespread but quite interesting are special centres for putting schools and enterprises in closer touch. These centres already exist in many developed and developing countries. In the Netherlands a *Contactcentrum Onderwijs-Arbeid* (COA), or school/employment liaison centre, has been set up in each of the 12 provinces of the country. One of the centre's main functions is to prepare and publish, at the provincial level, booklets describing all the options offered by vocational schools (including internships in enterprises). These booklets are sent to all the enterprises in each province as a means of encouraging them to offer internship opportunities for students and graduates from vocational schools.⁹

In Italy the *Agenzia Scuola-Mondo del Lavoro* (School/World of Work Agency), set up in Modena,¹⁰ operates an information service linking schools and enterprises. It carries out pilot projects, with the joint participation of teachers, youngsters and representatives from the business world, as well as organising internships for teachers in enterprises, familiarising them at first hand with the region's economic problems and local production units. In addition it supports co-operatives of youngsters set up in technical schools with the aim of heightening their awareness of technology and business.

In the Federal Republic of Germany efforts to promote initiation to the working environment led to the setting up of a supporting network operating on three levels.¹¹ The local level organises internships in the enterprise and provides logistical support and information material. These activities receive support at the regional level from study groups and at the national level from the *Arbeitsgemeinschaft Schule-Wirtschaft* (Education/Economy Association), which organises national and international conferences and publishes pedagogical, reference and vocational guidance materials.¹²

In some Latin American countries, e.g. Brazil, there are "contact" centres linking schools and enterprises, which operate on a private and

⁹ *Social Europe*, loc. cit.

¹⁰ *Ibid.*

¹¹ *Ibid.*

¹² More than 350 local associations gather information for teachers on employment opportunities.

profit-making basis; they are concerned mainly with setting up programmes of internships for students and graduates from technical schools and universities.

Counselling

The immediate purpose of counselling is to help students choose the most suitable occupation. It requires identifying occupations for which the candidate not only has the necessary interest and aptitude but also has a realistic chance of obtaining a suitable job. In order to undertake occupational counselling it is obviously necessary to stay abreast of labour market developments. Significant action in this field requires investment in information. Counsellors need to understand and possess up-to-date information on occupational profiles, tasks to be performed, skills required, wages or salaries paid, fringe benefits offered, employment prospects, level of education and experience needed and other conditions of the work environment. Labour market conditions and prospects have to be clearly understood.

Schools that do regular and serious counselling are bound to gain a better knowledge of the labour markets for their graduates. In developing countries the main problem is the lack of up-to-date information, especially on wages and salaries, employment openings and the education/training requirements of the various occupations.

Placement offices

Many training institutions have set up placement units or services exclusively for their graduates. These monitor the demand for trained people, select graduates or students who have nearly completed their training and send them to enterprises. In less frequent cases, they advise and support graduates in setting up micro-enterprises or launching out as self-employed workers. Periodically they carry out tracer studies of their graduates to assess the effectiveness of the training provided and collect information which could lead to the adjustment of curricula according to market needs.

Normally, employment services attached to the Ministries of Labour act as an intermediary between persons looking for jobs and enterprises looking for workers. By knowing the labour market situation they can orient training institutions towards the type and content of occupations needed. By having the best available information and exposure to a broad segment of the labour market they can understand it better than any individual training institution. While these go-between services play a significant role in industrialised countries, they perform very disappointingly in developing economies. The reasons for this are many. First, they typically cover a very small part of the labour market (less than 5 per cent) and for that reason the data at their disposal are not representative of the overall situation. Secondly, enterprises

do not use public employment services to recruit skilled manpower, going directly to the most prestigious training institutions instead. Thirdly, highly qualified workers seldom look for jobs through them, preferring to rely on newspaper advertisements.

4. Incentives for institutions and employers

Giving a say to interested parties is one way of pushing institutions to pay more attention to their clients. Previous sections dealt with solutions of this kind. But the most effective way is to offer tangible incentives.

Rewarding institutions for the successful employment of trainees

Under most financing schemes the pay of training staff is proportional to the number of courses offered or to the number of trainees enrolled. This encourages institutions to schedule more courses or recruit more students. But trainers have no practical reasons to be much concerned with the future employment of trainees. A better approach would be to reward training institutions for their effectiveness, as measured by the number of graduates they place in stable jobs.

In the State of California there is a scheme which allows any bona fide institution to train unemployed workers or those who are about to become so. If the trainee gets a job and keeps it for at least 90 days, the training institution is reimbursed for the costs incurred. For those trainees who fail to find or keep a job, there is no reimbursement whatsoever.¹³

In the Federal Republic of Germany the Nuremberg Federal Employment Institution has local agents operating training programmes for unemployed workers. These agents can subcontract with schools and training firms and choose the subjects in which training will be given. At the end of the year they are judged by the proportion of trainees who get jobs. By comparing the results achieved by agents in different towns the Nuremberg administration can evaluate their relative performance.

But even private training schools can function on the incentive principle. A very successful private technical school in New York provides job-training to disadvantaged minorities in diesel-engine maintenance, refrigeration, word processing and any other technical skill for which a demonstrated demand exists. Very poor people find ways to pay for the relatively expensive training, when equivalent training may be had for free in other institutions. Why?

The school sees itself as an employment broker, providing only the kind of training that enables individuals to get existing jobs. Students are recruited through television and other media advertising and by personal

¹³ Steve Duscha: *The structure of training in the United States: Toward a new model* (no date; mimeographed).

recommendation. Both recruitment and placement staff operate on commissions and earn more as they find students who succeed in their training, and then find jobs for those that do. The school considers its graduates to be its most important advertising agents (50 per cent of the referrals come through alumni recommendations). Thus it gets continuous feedback on quality of output.¹⁴

A different slant on the incentive approach is the recent Swedish initiative aimed at progressively removing the virtual monopoly of public institutions in providing training for the unemployed. All of the Labour Ministry funds for training and retraining unemployed workers used to be entrusted to public institutions. Now, an increasing share of these funds will be given to the bidder offering the best service. Only by beating the private bids can the public training institutions touch this money that used to come automatically to them.

Although we have no detailed information on how effective these schemes have been overall, in the particular examples cited here it seems that results have been positive. However, experience in applying similar methods of "payment by results" in other social programmes dictates caution in order to prevent distortions. Schools could bribe enterprises to keep graduates employed for a given time: this would allow training agencies to be reimbursed but would do nothing to achieve the objective of stable employment. Another risk is that the training offered becomes stripped of all its general content, responding only to the limited and specific needs of existing vacant jobs.

The system can also be ineffective in periods of economic stagnation. In 1980 the Chilean National Training and Employment Service decided to subsidise training institutions only for courses provided to the unemployed, with the proviso that at least 70 per cent of graduates or trainees were placed in wage or self-employment. Otherwise they would not receive the promised subsidy and would even be required to pay back previous cash advances to the public treasury. Evaluations indicated that "given the fact that unemployment rates remained relatively high and training institutions lack good connections with productive units, most of them have little interest in such contracts. However, some public as well as private enterprises used such public subsidies [which were available also for training activities undertaken by employers] to pay the first three to six months' salary of unskilled employees that they would have engaged anyway."¹⁵

Contract training

In some circumstances, firms are willing to subcontract for the training of their personnel with or without public subsidies, and the training they pay

¹⁴ Comment by John Middleton, Senior Officer, Education and Population Division, World Bank.

¹⁵ Corvalán, *op. cit.*

for is obviously needed. As a result, some institutions exist just to offer this kind of training. As a side activity regular schools and training centres also offer training services to public and private institutions.

This is a most desirable trend. Increasing the share of training offered under such arrangements will increase efficiency and improve the fit of training. It is not only that the training offered under contract presents *prima facie* evidence of being needed by the firm, but also it is useful for schools to know what firms need and are willing to pay for. In addition, such training does not burden public budgets and requires hardly any supervision by the State.

It is quite instructive to note that socialist countries like China and Bulgaria make extensive use of contract training. Bulgarian firms have a fixed amount of funds to be allocated for training. In recent years they have been inviting competitive bids from different (public) training institutions to carry out whatever training they may need. The Chinese system, recently subjected to many changes, also encourages firms to contract training from vocational schools. The main difference is that Chinese vocational schools offer contract training as a side activity while in Bulgaria all their revenues come from "selling" their courses to firms.

The real problem with contract training is the reluctance of firms to do more of it. Firms have no interest in spending time and money on training if the risk of losing trainees to other firms is unduly high. Therefore this could never be the sole or the most important way to provide training. But in addition, small and medium-sized enterprises are very often unable to identify their needs and risk buying unnecessary, inadequate and expensive training programmes. To minimise this difficulty, public or non-profit institutions could help such enterprises to pinpoint their needs for training and to select the best available programmes.

Incentives for entrepreneurs

Entrepreneurs react to environmental stimuli just as much as school administrators. Here too, the rules of the game may be changed and incentives for hiring a more educated labour force created. If the incentive system is such that having a less skilled labour force becomes less profitable, employers will have incentives to train more workers. Efforts along these lines have been made in the Republic of Korea.¹⁶ Firms with more unskilled workers pay higher taxes. However, entrepreneurs can reduce their tax burden by giving courses to their unskilled employees. More conventional are the income tax rebates for expenditures on training.

These are interesting schemes that operate with low-administrative costs and can make a useful contribution to the overall training effort. Yet they are partial solutions and not without shortcomings. First, it seems that for

¹⁶ B. Salomé and J. Charmes: *In-service training: Five Asian experiences* (Paris, OECD, 1988), Ch. 3.

some firms they may have been an unnecessary incentive. As a recent CINTERFOR study points out,¹⁷ some enterprises would institute training programmes for their employees even if they had to pay the full cost, without any tax deduction. Secondly, the criteria for granting incentives tend to be too broad, allowing for deductions from the cost of training activities of dubious social value. Thirdly, tax rebates have mostly benefited large enterprises in the most developed regions of the countries concerned. They finance training for those at the top of the occupational ladder and in the most dynamic sectors.

A well-known variant of the tax approach is to allow firms to use part or all of the payroll training levy to run their own courses. In other words, instead of turning over 1 or 2 per cent of their payroll to training institutions for general training purposes, firms can train their own staff in whatever skills they think most appropriate.

In some cases, eliminating tax penalties on training may be in order. It has been observed that investment depreciation rules in the United States may be a disincentive to increased training, as compared with increased fixed capital investment. "Managers noted that investments in equipment could be written off over 15 years, with a correspondingly lower cost in any budget year. But training costs had to be budgeted in the year of delivery. Thus from the point of view of annual profits, training was a much riskier investment."¹⁸

Clearly, the sort of schemes are very different from those producing trainees that firms do not want or those preaching to entrepreneurs about the advantages of human resources development. These focus on introducing real changes in the environmental conditions in which firms operate, in other words they have to do with changing the rules of the game.

Of course, since firms are more reluctant to pay for training than to hire well-trained workers, the classic solution has been to shift responsibility for training to the public sector. It is unrealistic to think that all or most training is going to be undertaken by the private sector. However, this brings us back to where we started, namely to the lack-lustre performance of state-operated training in responding to markets. The thrust of training policies should be to transfer training – or at least the decision-making foci – as much as possible to the productive sector.

5. Training in the real world

The underlying thesis of this article is that training has to adjust to demand, both quantitatively and qualitatively. Trainers cannot create demand for their graduates. If firms do not want training, the best that can be

¹⁷ CINTERFOR (Inter-American Vocational Training Research and Documentation Centre): *Regional review of vocational training in Latin America* (Montevideo, forthcoming).

¹⁸ Comment by John Middleton. See also Duscha, *op. cit.*

done in the short run is to shrink supply. While this approach should constitute the common denominator of most training policies, the world is more complicated than that. The present section addresses some of these complexities.

Real and apparent mismatches

The waste of material and human resources entailed by the inevitable mismatches between supply and demand is exacerbated by the intrinsically high cost of training, particularly as compared with academic education. Sometimes the difference amounts to ten times more per hour of instruction. This results in part from operating on too small a scale to utilise fully the fixed investments in equipment and people.¹⁹ But even under good conditions of utilisation, training is more expensive than education and it is not always possible to operate at the level that would minimise costs, owing to the small market for some skills.

However, these mismatches may not always be as dramatic as they appear at first sight. There are cases where trainees do not at once find jobs for which they have been trained (or have to change jobs subsequently) but have no difficulty in adjusting to alternative employment, especially in related occupations. These are generally the products of high-quality longer-cycle training courses. Here the mismatch is more apparent than real. By contrast, short training programmes do not always impart the kind of skills that are easily transferable to other occupations.²⁰ The obvious implication is the need to be much more careful with short programmes than with long technical-vocational courses that provide a "general technical education" – assuming, of course, that they are not significantly more expensive than the corresponding courses at regular academic schools.

Efficacy with equity

One of the justifications often given for providing training, in particular to deprived individuals, is the effect it will have in promoting equity. Equity is a goal as worthy as society wants to make it and there is no reason why training should be excluded. Nevertheless, what matters are the results, not the intentions. It may be considered legitimate to offer training to groups that do not maximise the rate of return on the investment. But there is little point in offering training to those who will derive no benefit from it because they cannot find jobs in which to use the skills acquired.

¹⁹ Another reason for these enormous differences is the fact that academic schools are often overcrowded. While this impairs the quality of teaching, it does reduce costs.

²⁰ See C. de Moura Castro: "The right courses for the wrong jobs? Or vice versa?", in Khadija Haq and Uner Kirdar (eds.): *Managing human development* (Islamabad, North South Roundtable, 1988).

In other words there has to be efficacy in equity. The point here is that it serves no social purpose to offer the wrong training or training to the wrong persons. For instance, the informal sector is mostly composed of the poorest segment of society. For humanitarian reasons persons in this sector deserve all the support they can get. But it makes little sense to offer them courses that are not going to result in higher productivity or employment. There are other ways of spending money to help them if useful training cannot be provided.

There may be good reasons to offer regular education as a human right, to make people better citizens or even to keep people meaningfully occupied during periods of unemployment. But it serves the cause of equity little to offer expensive training for which there will be no corresponding jobs. Restating the argument, training should respond principally to real market demand rather than be driven by wishful thinking about labour markets or utopian considerations of equity.²¹

What if we end up with too little training?

The argument so far is that it is a bad policy to run counter to market demand. Nevertheless, we may in some cases find that firms want very little training, particularly if they have to pay for it. While it is doubtless better to have less training than training that goes to waste, it is pertinent to explore further the determinants of the training demanded by firms.

It has been stated that many private firms in the United States offer very little training, have a very ad hoc approach to it, and react only to short-term needs.²² In other words, they have a very myopic attitude towards training; they respond to short-run considerations rather than to long-run welfare or productivity goals.

It has been found that the assembly lines of (multinational) garment firms being installed in Costa Rica demand a lot less training than the vocational training system is prepared to offer.²³ Entrepreneurs in these firms are not keen on having the highest quality skilled workers, mainly because they can operate profitably with cheaper semi-skilled labour. They would not refuse better-trained workers as such but see no reason for investing in training and creating subsequent expectations of wage increases.

It follows from what has been said above that the only rational reaction to this situation is to offer less training. This may be a very reasonable response, at least in the short run. Why offer training if we cannot persuade entrepreneurs to value excellence in skills and to offer jobs to graduates?

²¹ It is instructive to note some recent resolutions of the European Community to the effect that training should not be used as a form of welfare.

²² See, for instance, Duscha, *op. cit.*

²³ See W. E. Solano-Rojas: *L'Institut national d'apprentissage (Costa Rica) et les politiques nationales et internationales de formation professionnelle: Mythes et réalités*, Ph.D. thesis (University of Geneva, 1987).

The Chilean experience is a case in point. The National Institute for Vocational Training (*Instituto Nacional de Capacitación – INACAP*) was originally financed out of the public budget. As a result of new government policies, it lost its automatic funding and was told to sell its services to firms. However, it so happened that under the precarious conditions in which Chilean private firms were trying to survive, it found too few customers for its training and had to start offering courses to another clientele – individual fee-paying students.²⁴

This creates a very difficult predicament. But the question deserves further thought. While firms have the last word in hiring, they are not necessarily able to translate their need for increased productivity into changes in skill profiles. In some cases trainers can play a key role in demonstrating the benefits of better skills. Good and serious salesmanship on their part can go a long way towards increasing demand. From a different perspective, the needs of individual firms are not the same as the needs of industry. Individual firms look for individual payoffs. But some employers' associations are more concerned with the interest of industry as a whole and tend to take a longer view. Federations of industries may have a broader perspective of training than individual firms and better appreciate the advantages of a well-trained labour force.

6. Changing the rules of the game

One of the main findings of this article is that very often the problems of lack of fit between supply and demand of training stem not from the training institutions but from the current rules of the game. As seen from their own perspective, training administrators may be responding in a very rational way to environmental stimuli, but the problem is that these stimuli may often drive the training given in the wrong directions.

Assuming that a relatively sound incentive/sanctions system exists, a feedback mechanism is essential to relay to the decision centres the information required to readjust to new or different conditions. If the persons who have the power to make corrections in the system do not have access to reliable information about mismatches, these will never be corrected.

There are many ways to generate this information, e.g. through (i) *tracer studies* that follow up on graduates to find out what and how well they are doing and how they are using what they learned in the training programme; (ii) *cohort studies*, usually based on household surveys, that report equivalent information (these tend to provide less detailed information about training but make it possible to compare trained workers with others in similar positions); (iii) *sectoral or industrial surveys* that describe the overall profile of the labour force of a given industry; and (iv) *statistics* of placement offices, social security or employment services.

²⁴ Corvalán, op. cit.

Newspaper advertisements, well-placed informants²⁵ and many other sources of information can also be deployed. At times schools will want to use several indicators simultaneously, in addition to informal methods of checking and observation that can be just as effective. There is no single recipe for all situations.

Although having requisite information on what is happening is vital, it is far from sufficient. As already stressed in section 1 above, decision-makers are political animals who react to information according to an equation in which their power and prestige play a part. Do they gain by ignoring it? Chances are that they will. It has been observed in Sweden that it is far easier to conduct tracer studies than to convince administrators to use the information provided to correct the system.

We always need to consider the overall political configuration in which the feedback mechanisms will be operating. Is it politically wise for the decision-maker to ignore the signals? As a rule, change involves political costs for those who undertake it. They have to work harder, to convince others and to face the opposition of those who are going to be hurt by change (unemployed instructors?) and who, in turn, can inflict political damage.

To be effective, training systems have to reward people who have the courage to make necessary changes and sanction those who do not. Differential payoffs for different behaviour need to be built in. Preaching does no good. Information on labour markets, such as tracer studies, is more a consequence of the existence of a feedback system than a driving force. The lesson that we can learn from all this is that instead of preaching to or blaming training institutions, what we have to do is to change the rules of the game. Several positive ways in which this might be done have been indicated and illustrated in this article.

²⁵ See ILO: *Labour market information through key informants*, Report of an evaluation seminar conducted with the support of DANIDA (Geneva, 1982); and L. Richter: "Manpower and employment information through key informants", in *International Labour Review*, 1982/4.