

higher education in Canada, in which enterprise nursing as an emerging discipline is a vital and important partner.

Janet C. Kerr
Professor and Associate Dean
Faculty of Nursing
University of Alberta

James B. Davies and Glenn M. MacDonald. *Information in the Labour Market: Job-Worker Matching and Its Implications for Education in Ontario*. Toronto: for the Ontario Economic Council by the University of Toronto Press, 1984.

For some potential readers the book's title may suggest a practical handbook on matching jobs and workers, combined with a guidebook for school guidance counsellors. These readers would be disappointed. Instead, this is a book for academic economists and for bureaucrats who design education and training programs. Davies and MacDonald have developed a new theoretical model of investment in education, based on personal information accumulation rather than skill acquisition. They compare this model with the human capital and the screening models, then proceed to a concise outline of the rationale for government intervention in individual markets and an examination of education and training policies in Canada.

After a short introductory chapter, the authors devote the second chapter to an outline of the human capital and the screening/signalling models that have been used to analyze investment in education for the past several years. There is a greater emphasis on the screening model (that is, use of educational credentials to differentiate new entrants to the labour force) because the authors' objective is to show their new informational model provides an alternative explanation to signalling for the "non-human capital element of education", namely, the effects of schooling other than skill acquisition. But in order to enhance the contribution of their informational model, the authors overstate the economic sterility of signalling by concentrating on its extreme form. Indeed, they treat all of the screening, sorting, credentialling, and signalling literature under the "signalling" rubric, without further differentiation.

The third chapter is the core of the book, where the informational model is presented fully. This model assumes that workers differ in their abilities to perform various tasks or job functions, and that neither workers nor employers have good information about these abilities prior to employment. The abilities in question are not the skills that are learned through formal schooling, but rather the inherent skills and abilities that later complement acquired skills. School taught skills are measured by tests and examinations, while the latter apparently are identified

through the process of schooling itself. (Very few specific examples of such skills or their identification are provided, so this central feature of the model remains vague.) Education is seen as a means for potential workers to learn about their own abilities, and especially how they differ from other persons in this regard. Information-acquisition is therefore considered to be a productive activity that complements human capital development. That is, education increases productive resources in an economy through skill development; and then – according to the informational model – directs these resources to their more efficient use through providing students with more information about themselves. To quote the authors, their model “highlights the role of schooling in efficiently identifying the most productive application of given skills.”

The model is carefully developed in theoretical terms (including a rigorous, mathematical appendix), and has an intuitive appeal to the reader who is gradually led to agree that schools do provide students with an opportunity for self-knowledge. The abstract nature of the model may, however, discourage some lay readers who find difficulty in relating the authors’ terminology to conventional educational terms and experiences. For example, the authors emphasize the quality of the “label” that differentiates students and describe this in terms of “optimal factor bundles”. While this informational model is of theoretical interest, it seems to have less empirical significance than the authors suggest – especially when their policy conclusions can be derived from the human capital model alone. One wonders whether the self-knowledge gained through schooling has nearly so important a role in the economy as the skill acquisition function. Moreover, the information to be acquired is less defined and is realized with less certainty than is skill acquisition. Finally, it must be recalled that market imperfections are such that the information obtained by a potential worker may lead to better, but not likely to optimal job-matching. If a worker’s objective is to maximize life-time income and job satisfaction, this can often be realized in several alternative jobs and not necessarily in the one indicated by the “person-specific information” of this model. Similarly, the lumpiness imposed by school years or levels and other imperfections in the educational system make it difficult for students to adjust their educational paths as they continuously acquire this self-knowledge.

Chapter four presents a concise discourse for non-economists on the economic rationale for government intervention in markets. This includes efficient resource allocation, equitable income distribution, and stable market behaviour. While it is argued that there is no economic reason for the direct *provision* of education by governments, there are specific cases identified where subsidies are warranted. As noted previously, the informational model offers little that is unique for educational policy since the informational and human capital models are so complementary. On efficiency grounds, the authors argue that education should be provided in a freer market, with institutions permitted to charge full-cost tuition fees. Government’s role would include subsidies to induce production of externalities, guaranteed loan schemes to overcome capital market imperfections, and a contingent-repayment loan scheme to offset students’ risk aversion. The authors

propose that there be equal subsidies for formal schooling and on-job training, but give little heed to whether the social benefits from these different activities are similar in nature or value.

Equitable income distribution would require more public expenditure on elementary and secondary schooling (where all income classes are represented) and for on-job training, with less spending on the class-biased postsecondary level. Equity would also require equal subsidization of formal schooling and on-job training, but this might be partly offset if there are different external effects associated with the two activities. Voucher schemes as a subsidy mechanism are discussed at length. Throughout this economic comparison of schooling and on-job training, one increasingly wonders whether these are equally effective in producing "person-specific information" and whether each produces a different kind of information to the participant.

Davies and MacDonald explicitly distinguish the information about individuals' own abilities from information about jobs, such as relative wages, employment security, advancement opportunities, and so on. They argue that it may be unwarranted for governments to provide this kind of information because they claim that students are well-informed on these matters. This contradicts a number of recent labour market reports that propose an expanded role for government in providing labour market information. While it may be true that students can correctly rank occupations according to pay levels, it is necessary to know absolute differences in pay to estimate net returns to training for a given occupation. Students also need to know more about cobweb cycles in occupational labour supply and earnings levels, lest they treat cyclical peaks or troughs as if they represented the long-term.

In chapter five, the trends in enrolment and expenditure for education and training in Ontario and Canada are rationalized in terms of the authors' informational model. The sixth chapter addresses expenditure allocations between institutional and on-job training; and a concluding chapter presents policy prescriptions for the federal and provincial governments. These chapters give empirical and institutional reality to the more general and theoretical arguments that emerged from the preceding chapters. These include an impressive and extensive consideration of the many policy issues confronting all levels and kinds of education during the current decade. Any attempt to summarize or evaluate what Davies and MacDonald present in this section of their book would unreasonably extend the length of this review. Instead, anyone looking for a contemporary, comprehensive economic analysis of educational and training policies will find this book a useful reference, and possibly a challenge to the customary view of the educational system as concerned only with skill development.

David Stager
Associate Professor
Department of Economics
University of Toronto