INTERNATIONAL COMPETITIVENESS AND CURRENCY STABILITY: IRELAND AND THE UK

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Introduction

This paper provides a comparison of the EU export competitiveness of UK and Irish firms that trade in the EU. It considers four measures suggested by Buckley *et al*'s (1988) 3-P model of competitiveness; real labour costs, productivity, price and research and development (R&D). These measures are held to represent a firm's potential competitiveness. The paper proceeds from the a priori position that, as a result of Irish stable exchange rate arrangements within the EU, Irish firms have a greater potential for achieving sustained competitive advantage than their UK counterparts.

The results from questionnaire and interview data do not indicate strong statistically significant linkage between exchange conditions and a firm's relative potential competitiveness. However, a number of important observations may be drawn from the empirical evidence:

- Where business perceives future stability in the exchange rate then investment in product and process development is more readily undertaken.
- Where the possibility of exchange-induced price gains has been removed, then the firm must rely on internal efficiency gains to improve price competitiveness.
- The focus of price competitive activity will move from the high volume to the high value product.

Thus, it may be concluded that stability in the exchange rate will shift the focus of firms' competitiveness towards strategies that create the greater potential for sustained competitive advantage.

The paper is organised as follows: first, a brief exposition of the theoretical background is given; second, the literature in the field in reviewed; third the research method is outlined; fourth, results of the empirical analysis are recorded, discussed and interpreted; finally, our conclusions are set out.

Conceptual Background

This paper sets out to explore the relationship between two concepts, the exchange rate and competitiveness, yet the literature provides no consensus on definition or measurement

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IBAR – Irish Business and Administrative Research, Volume 19/20, Number 1, 1998/9, pp. 1–15.

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of either. We begin be addressing this problem.

In accordance with modern trade theory both price and non-price or qualitative aspects are critical to an understanding of the concept of competitiveness; this has led to the development of new radical approaches to measurement; among these are the 3P model (Buckley *et al.*, 1988). Taking an holistic approach, this model brings together a wide range of known definitions and measures and is used here to provide a dynamic framework within which to evaluate competitiveness. Buckley *et al.* identify three classifications of competitiveness measures – potential (input measures), performance (output measures) and process (those aspects by which potential translates into performance). Four measures of 'potential' appropriate to research at the level of the firm are selected as a test of the effect of stability of the exchange rate on this classification of competitiveness.

The second aspect informing this study is the exchange rate. Broadly, studies in the field make use of either real exchange rate measures (where the focus of enquiry is the macroeconomy) or the nominal rate (where the level of study is the firm). Akhtar and Hilton (1984) and Perée and Steinherr (1989) believe the nominal rate is representative of future uncertainty and is appropriate to firm level analysis. These authors do not suggest that business activity is unaffected by real economic variables, such as employment, interest and inflation rates; they imply only that expectations of nominal exchange rate instability do feed through into firms' behaviour. Perée and Steinherr also suggest that a broader perspective, containing both quantitative and qualitative elements, is necessary to a complete understanding of the effect of exchange rate instability (or otherwise); yet they, in common with many other authors, derive quantitative measures based on ex post movement of the nominal rate over time, that do not adequately capture the nuances of future expectations. Thus, whilst accepting Perée and Steinherr's conceptual approach, we adopt an alternative means of assessing exchange rate expectations.

The debate currently taking place in the UK on the proposed single currency reflects the similar debate that took place in the mid to late 1980s on the UK's membership of the ERM; the basis of an appropriate measure of expectations lies in this area. From 1989–93, Ireland maintained a consistent policy of commitment towards the ERM, whilst the UK was alternatively out, in, and again out of the ERM. Thus Irish firms trading in the EU operated in the certain knowledge of long-run commitment by Irish Government to stable currency arrangements, whilst UK firms faced uncertain and unstable exchange rate conditions. The UK and Ireland's different policy positions are put forward here as proxies for business expectations or perception of stable and unstable exchange rate conditions respectively; this follows Knight and Mathieson's[1] (1979:96) approach to measurement.

Appropriate approaches to measurement of the four selected aspects of 'potential' competitiveness are described below (with measurement details given elsewhere[2]). Theoretical evidence on the relationship between each and the exchange rate is in short supply, but a review is now given of what is available.

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Real Labour Costs

In international comparative studies cost competitiveness is normally measured in terms of labour costs (Enoch, 1978); these have been identified by the Bank of England (1982), the IMF (Artus and Knight, 1984) and the OECD (Durand *et al*, 1992) as the most appropriate indicator. Capital and technology tend to be mobile across international boundaries and raw materials are generally sold in the world's commodity markets; thus the only real differential cost factor between countries is unit labour costs. In international comparison, variation in related non-wage costs (for example, pensions, holiday entitlement, NI contributions) will occur. To accommodate this difficulty, the data reported by respondents in our survey on labour cost per worker per year (excluding non-wage costs) was adjusted to constant labour costs by applying the index of hourly wages in industry in real terms as given by Eurostat. Real labour costs were assessed for three points in time: 1989, 1991 and 1993.

If relative labour costs are directly related to the nominal exchange rate then one would expected labour costs to exhibit short-run fluctuations (Artus and Knight, 1984). Nonetheless, a stable nominal exchange rate will alter the underlying behaviour in the economy; anti-inflationary policy will be reinforced through the discipline required to maintain the level of the currency; this leads to fewer and lower inflationary wage demands, as in Friedman's Expectations Augmented Phillip's Curve Analysis (Economist, 1989). Thus a stable nominal currency 'allows businessmen to exercise greater control of costs, particularly in pay settlements' (Bank of England, 1991).

Productivity

The most commonly used dimension of productivity in the short run is labour productivity as measured by output (turnover) per head (Muellbauer, 1986; 1991). The popularity of this measure as an indicator of competitiveness in the business community may be accounted for by the wide range of practical and measurable solutions introduced to induce growth; for example, the skills base of the workforce may be improved (Neale and Haslam, 1994). Pratten (1976) argues against the use of this measure in international comparisons; he maintains that confusion arising from the wide variety of secular factors that may affect the rate of productivity will lead to difficulty in interpretation. Despite these drawbacks, labour productivity is a useful, commonly used measure of competitiveness through its direct relationship to costs; it provides a necessary element in the overall interpretation of the nature of competitiveness. Productivity is measured here for 1989, 1991 and 1993.

In international comparison, labour productivity is, in part, a function of the nominal exchange rate (Rossi *et al*., 1986). For example, exchange rate appreciation leads to inflation which, in turn, will reflect in decline of productivity. Alternatively it may be argued that an over-valued currency will generate significant decline in international price competitiveness; this in turn will pressure firms to cuts costs and

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improve work practices, and thus improve productivity in the long run (Muellbauer, 1991). However, stability of the nominal exchange rate provides more a positive contribution to increased productivity levels and increased advantage in international competitiveness through lower sustained wage levels (NESC, 1993).

Price Competitiveness

Relative price competitiveness is difficult to assess accurately without detailed consideration of the minutiae of individual firms' products and customer service. Thus, following Ashcroft *et al*'s (1994) self-assessment technique, respondents were asked to give a 'best-estimate' of the average price of their main product in comparison to that of competitor's similar products during the five year period of the study.

De Grauwe (1988) asserts that the relationship between price and the nominal exchange rate is axiomatic; where the firm is a price-taker, and assuming that purchasing power parity holds, then prices of internationally traded goods adjust in accordance with the variation in the nominal rate. However, Venables (1990) suggests that in imperfect markets conditions, typical of the modern trading world, the firm may not adjust its prices but adopt alternative strategies; for example, maximising profits or pricing to market. This latter view is in keeping with the findings of several authors (including Aliber, 1976; Hooper and Kohlhagen, 1978; Cushman, 1983; and Kroner and Lastrapes, 1993) who agree that exchange rate variability has a significant effect on price, but that the influence may be positive or negative.

Research and Development

Research and development is generally categorised in one of three ways: type of R&D (Pavitt, 1984, Cantwell, 1987), employment of qualified scientists, and patent statistics (Patel and Pavitt, 1987). In each case measurement is difficult (Sciberras, 1986). For example, research may only have impact in the long term whilst development expenditure may be more appropriate to determine the impact of technology in the short to medium term. Also, R&D facilities may take place up stream or be contracted out. Sciberras concludes that all quantitative indicators of technology as measures of international competitiveness are flawed and must be supplemented with qualitative data. For the purposes of this study sample firms were asked to indicate whether, during the time span under study, they were involved in R&D and, if so, at what level (Young *et al.* 1988, Taggart 1997).

Firms operating with unstable national currencies are reluctant to undertake long-term investment to improve product quality or to undertake product differentiation (Stout, 1977; Olding-Smee and Hartley, 1978). Also, a more stable export performance, aided by stability of the nominal exchange rate, allows for forward planning and encourages greater investment in R&D (Bank of England, 1991). Non-price competitive activity, identified as an important element of competitiveness in imperfect markets,

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relies on investment in R&D. In the UK this could be more easily achieved if the 'stop-go' effect on export sales that arises from sterling's instability were to be removed (Currie and Williamson, 1990). The search for competitiveness should be concentrated on restructuring and investment that is required to address problems of inefficiency, low productivity and the mature product. This is more readily achievable where stable nominal currency conditions allow for planning beyond the short run. (Cushman, 1988; NESC, 1993).

Thus, from the above, we hypothesise that exchange rate stability is linked to potential competitiveness as described by these four measures; that is, Irish firms will show greater potential competitiveness than UK firms in terms of real labour costs, productivity, price, and R&D.

Methodology

The research method comprised two stages, a postal survey and detailed post-test interviews. The postal questionnaire was sent to 758 manufacturing firms in the electrical and chemical (sunrise) and textile and metal (sunset) industries. The final response rate was 83 Irish (24.2%) and 76 UK (20.9%) firms that was representative of the industries, both multinational and indigenous ownership, and covered a wide range of employment size. From the respondents, a matched-pair sample of firms (as described by O'Farrell and Hitchens, 1986) were selected for interview. A cohort of 24 Irish and 24 UK companies was identified; the matching criteria were ownership (Peck, 1985), industry and size (O'Farrell and Hitchens, 1986; Ashcroft *et al.*, 1994). The purpose of the first stage of the empirical analysis was to provide preliminary evidence to be validated (or otherwise) by the second stage of the research, and to allow generalisability of the results. The purpose of the second stage was to address more fully aspects not adequately addressed by the postal survey and to allow full and informed interpretation of the data.

Data from the postal questionnaire is analysed by t-test by country (Table 1), by industry (Table 2) and by ownership (Table 3). The postal data specific to the matched pairs firms is further analysed using the Wilcoxon test for correlated samples; this allows the effects of the obvious structural influences by which the sample had been constrained to be removed from the analysis (Table 4). Interpretation of the statistical data relies heavily on the evidence provided at the second stage, by Financial Directors who, in each case, were the interviewees.

Results and Intepretation

Real Labour Costs

The results shown in Table 1 for real labour costs do not entirely confirms our a priori assumption that for each year Irish firms would show significantly lower levels of real wage costs; although this was found for 1989 and 1991, only the 1991 result is significant.

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TABLE 1: t-tests: Measures of Competitiveness (Full Sample)

Variable	*Irish Mean*	*UK Mean*	*t-score*	*p-value*
Real Labour Costs 1989	0.26	0.30	-0.75	0.46
Real Labour Costs 1991	0.23	0.29	2.13	0.03
Real Labour Costs 1993	0.29	0.26	0.90	0.37
Productivity 1989	76.0	81.5	-0.45	0.65
Productivity 1991	91.2	93.9	-0.18	0.86
Productivity 1993	104.6	100.0	-.018	0.86
Price	3.20	3.18	0.20	0.85
R&D	3.49	4.24	-2.97	0.00

For description of measures see note 2

Detailed exploration of the data shows the 1991 result arises from a decline in Irish real wage costs in the indigenous sector, but that this was significantly different from UK-owned firms only in the textile sector (Table 2).

TABLE 2: Significant t-tests: Measures of Competitiveness by Industry

Industry	*Variable*	*Irish Mean*	*UK Mean*	*t-score*	*p-value*
Textile	Real Labour Costs 1991	0.20	0.28	—2.48	0.02
Chemical	Real Labour Costs 1989	0.18	0.26	—2.13	0.04
	R&D	3.00	4.63	-3.10	0.00
Metals	Productivity 1989	54.2	81.3	-2.01	0.05

For description of measures see note 2

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Low wage costs were also present in Irish multinational firms and in the chemical sector in 1989. However, a significant hike in the level of Irish wages between 1991 and 1993, associated with a downward trend in UK wages, resulted in all Irish wages being relatively higher than those of the UK by 1993.
The Wilcoxon test (Table 4) showed no significant results indicating that structural effects outweighed exchange rate effects in this aspect of potential competitiveness.

The findings here reflect the general trend. Irish hourly wages in manufacturing industry rose from an index (1985 = 100) of 108.6 in 1989 to 121.8 in 1993; UK wage costs rose from 110.5 in 1989 to 118.7 in 1993 (Eurostat, 1993). In Ireland, incomes policy results in wage restraint; however, it also ensures that labour costs are on a continuous upward trend. Also, wage increases must be awarded even in industry sectors where this is not practicable due to low profit levels (for example in the textile industry). UK wage costs were reduced in relative terms level by the 1993 depreciation.

There is no evidence here to support the theoretical supposition made in the literature that better opportunity for business to control wages will occur in the stable macroeconomic environment that is a requirement of stable currency arrangements such as the ERM. However, evidence from the interview process suggests otherwise. Without exception, the Financial Directors in all Irish and UK companies believed that stability of the exchange rate gave greater control over wage costs. We suggest that linkage does exist as hypothesised, but that where wage expectations have been contained by periods of low inflation levels (as has occurred in both our comparator countries), then alternative factors come into play. In Ireland a low level of inflation is a requirement of ERM membership; since the mid to late 1980s, UK governments have opted to target low inflation.

Additional mechanisms are in place at national and firm level in both countries to sustain relative wage competitiveness. In Ireland, the spirit – if not the letter – of incomes policy is circumvented by flexible working practices including contracting out, short term temporary contracts, short term lay-off, and shift working. Consequently, stability for the firm in terms of labour costs is translated, for the employee, into stability of hourly rates, but instability in the number of hours worked and take-home pay. In addition to the post-September 1992 currency depreciation, UK wage costs have been lowered by a shake out of employment, lack of a minimum wage, and widening of the gap between wage and benefit levels (through a lowering of benefit levels). However, the UK's approach may provide short term advantage only, for the following reasons. First, sterling may appreciate (and did so significantly throughout 1997). Second, competitive depreciation invites retaliatory devaluation by competitor countries. Third, in the UK there is no external influence controlling inflation, so the ability to tolerate relatively higher levels raises the possibility and expectation that wages may also rise. Fourth, wages in a western industrialised country are unlikely ever to be competitive relative to East European or East Asian economies. Fifth, driving wage rates downwards

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TABLE 3: Significant t-tests: Measures of Competitiveness by Ownership

Ownership	*Variable*	*Irish Mean*	*UK Mean*	*t-score*	*p-value*
Multinational	Real Labour Costs 1989	0.23	0.28	—1.92	0.05
Multinational	R&D	3.13	4.30	-2.50	0.02

For description of measures see note 2

TABLE 4: Wilcoxon Signed Rank Test for Matched Pairs

Matched Pair	*Variable*	*p*
UK and Ireland	Real Labour Costs 1989	0.36
UK and Ireland	Real Labour Costs 1991	0.41
UK and Ireland	Real Labour Costs 1993	0.63
UK and Ireland	Productivity 1989	0.75
UK and Ireland	Productivity 1991	0.25
UK and Ireland	Productivity 1993	0.55
UK and Ireland	Price	0.66
UK and Ireland	R&D	0.43

For description of measures see note 2

in real terms beyond the short to medium term may lead to instability and industrial unrest in the long term.

Thus, within the context of this research, control of wage costs in both countries has moved to second stage microeconomic solutions. However, our interview evidence lends support to the literature indications and to our view that the perception of business is that greater control over real labour costs may be exercised where the exchange rate is known to be stable.

Productivity

No significant results were reported by t-test analysis for (labour) productivity (Table 1) with the exception of the metal industry in 1989 (Table 2), where UK firms had higher levels. At the time of the study, many UK exporting metal firms were in receipt of a

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subsidy from British Steel, as a result of which this significant difference is likely to be an aberration. Wilcoxon matched pairs analysis shows no significant differences for this facet of potential competitiveness (Table 4). Further exploration of the complete data sample shows the following sectoral differences:

- Irish-based multinational subsidiaries overtook their UK counterparts in terms of productivity in 1993.
- Indigenous Irish firms reported higher levels of productivity than UK-owned firms in 1989 and 1991, but lagged by 3.3 percentage points in 1993; this is thought to be a function of their greater reliance on trade in the UK and loss of relative wage competitiveness.
- At each point in time, Irish-owned firms indicate higher levels of productivity than Irish-based multinational subsidiaries; this contradicts O'Donnell and Kenny (1993) who suggest that 'dualism' exists in Irish manufacturing industry with the multinational subsidiary having significantly higher levels of productivity.
- Both countries have low levels of productivity in the traditional textile and metal industries. Over the five year period the Irish chemical sector displayed a very rapid increase in productivity compared with UK rivals. On the other hand, the UK electrical sector reported greater increased productivity 1989–93.

Irish productivity in all firms was lower in 1989 and 1991 but greater than UK levels by 1993. Although the 1993 results are not statistically significant, read against Ireland's loss of wage competitiveness for this same year, the trend is encouraging for Irish business.

The evidence from the interviews suggests some support for our hypothesis and the literature evidence. For example, Irish interviewees argued that increased productivity was being achieved through investment in process technology that had been previously undertaken; stable currency arrangements had allowed for planning beyond the short to medium term. In addition, interviewees spoke of a sea change that had occurred in Ireland during the previous decade in education and in skills training, with movement away from the traditional arts towards computer technology, science and engineering-based subjects. Accordingly, the skills level of the workforce is rising strikingly, allowing the introduction of complex production processes. This education strategy is now reflecting in productivity levels in the sample firms; indeed, it may be argued that the Kaldor paradox applies in Ireland. It is not argued here that this strategy is directly linked to the ERM policy; rather, it is connected directly to Ireland's general move away from competing in terms of price that has arisen as a consequence of the stable currency arrangements. On the other hand, UK respondents indicated that productivity gains were the result of redundancy and low wage settlements. These alternative causes suggest that Ireland has the greater probability of sustained competitive advantage in productivity.

Thus, we argue that productivity is linked to business perception of exchange rate stability, though the linkage is indirect and comes through reduction in labour costs, improved process technology and better work-force skills.

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Price

Table 1 shows no significant differences in price competitiveness between UK and Irish respondent firms, although UK firms show marginally lower prices than Irish firms; also, the Wilcoxon test show no significant differences between the matched-firms.

The results here raise two issues. First, the literature suggests that when price has been removed as an element of risk (where the exchange rate is stable) then the focus of firms' competitive activity will be on non-price factors. This implies that, in this research, UK firms should be significantly more price competitive. Yet evidence from the data suggests that, generally, Irish firms are equally price advantaged, giving rise to a second point. Evidence of successful Irish price competitive activity is not wholly compatible with the theoretical implication that non-price activity will be the focus Irish EU-export trade. It is suggested here that Irish firms may indeed focus on non-price competitiveness, but are also cost-efficient allowing them to compete actively on both fronts.

Strong interview evidence shows that where the possibility of exchange-induced price gain has been removed, then the focus of price competitive activity shifts to costs. Irish Finance Directors argued:

- 'The exchange rate does not vary, as a result, Irish firms must look to their own capabilities to maintain price competitiveness.'
- 'Price cannot be ignored, and the terms of trade do not alter, as a resultI r i s h firms must be cost efficient to maintain competitive prices.'
- 'We trade in the real world and price cannot be ignored.'
- 'Markets dictate prices; these must be met.'
- 'In today's harsh trading conditions, all firms compete on price; this is achieved by strict cost control.'
- 'Currency costs are known; this means prices and costs may be accurately accounted.'

UK interviewees also argued that price was a significant factor in international competitiveness and that product price was linked directly to the level of exchange. Indeed, two UK firms suggested that a low price level, brought about by a competitive level of exchange, was the key to all aspects of international competitiveness, whilst one firm argued on behalf of 'price, price and price again'. We do not suggest that UK firms are not cost-aware; for example, the practice of sterling invoicing allows risk of a depreciating exchange rate to be transferred to the foreign buyer; also evidence has been cited above of the UK's ability to compete effectively on cost through low wage levels. However, in the UK, linkage between price and the exchange rate comes about in the classical sense; our interview evidence suggests that firms work on the assumption that purchasing power parity holds; where possible, prices will be varied in accordance with the exchange rate.

Thus, we conclude that price competitiveness is significant in either circumstance.

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but how firms achieve this is fundamentally altered. In Ireland, the firm is obliged to rely on its own strategies to drive down costs and maintain international price competitiveness; these strategies include:

- flexible labour practices;
- sourcing imported inputs in countries supplied with exports in order that payables and receivables are matched;
- holding sterling bank accounts when trading with the UK;
- contracting out R&D;
- good quality control and waste management.

UK firms have the opportunity of achieving competitive prices both through efficiency gains and through favourable terms of trade, yet the emphasis was found to be on the latter. Irish firms will have difficulty in sustaining relative price competitiveness if UK rivals improve their internal cost control.

Research and Development

Table 1 shows highly significant differences in R&D between the two comparator countries; detailed exploration of the data shows UK firms having greater involvement in all classifications of R&D up to and including, product development for home, EU and world markets. The Wilcoxon test (Table 4) shows no significant differences between the matched-pairs firms implying that structural factors were, in part, responsible for the observed differences.

The initial results here point to possible failure of Ireland's firms in respect of the level of R&D carried out. However, interview evidence found a number of pertinent factors, indicating that country comparison of this aspect of competitive potential is not clear cut. For example, UK firms typically retain in-house R&D staff and facilities whilst, in order to save costs, Irish firms outsource this activity on a contractual basis. Detailed examination of the data showed significant differences were concentrated in the multinational sector (Table 3), and in the chemical industry subsector (Table 2). Both these sectors were identified as having high levels of productivity in Irish firms, achieved through previous investment in process technology; this explains lower levels of current R&D activity. Textile firms argued theirs was a traditional industry that could sustain a large degree of mature technology. The chemical and metal industries have been required by recent EU harmonisation legislation to make alterations to their products; Irish interviewees reported this process was complete. At the time of the study, UK firms were currently 'initiating' the necessary changes. Thus high UK levels of R&D in these sectors may be of a 'one-off' nature, and the findings may be time limited.

Thus, evidence of association between the incidence of R&D and stability in the exchange rate was clouded by a wide variety of secular factors. Yet, Irish Finance Directors strongly argued that R&D was more easily undertaken where future exchange rate conditions are perceived to be stable; this allows investment and forward planning

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to be more easily undertaken. Despite these remarks, the evidence is that UK firms (particularly in the electrical and textile sectors) are involved in primary research to a significantly greater extent than Irish firms that tended towards development only.

Conclusions

This paper set out to explore the relationship between exchange rate stability and four aspects of competitiveness, defined by Buckley *et al.* (1988) as describing firms' competitive potential. The aspects were real labour costs, productivity, price, and R&D. In some respects, it is a fallacy to separate these four measures as each is inter-related: this pattern emerged from our analyses. Nonetheless, consideration of the individual aspects served to highlight specific issues. The results indicate that, where inflation has been contained, linkage with real labour costs is outweighed by alternative national and firm specific factors. Productivity and R&D are indirectly, but positively, linked through improvement in process technology and in work-force skills; both are more readily undertaken where future costs and revenues are assured by stability in the exchange rate. The most immediate influence on a firm's behaviour occurs in its price competitive activity. Where price has been removed as a risk element, then the focus of price competitiveness moves from reliance on exchange-induced advantages to firm-specific efficiency-induced cost gains. UK firms have the possibility of achieving advantage in price through both favourable terms of exchange and cost-efficiency gains whilst Irish firms must rely on cost gains alone. Yet, the evidence of this research is that knowledge of exchange rate stability has acted strongly and positively on Irish firm behaviour to the extent that they are, in the main, equally or more price competitive in EU export trade than UK rivals.

We have argued that Irish firms have advantage in EU trade through the country's adherence to currency parity with EC partners, whilst UK rivals are disadvantaged as a consequence of its government's muddled approach to exchange rate matters. Yet, our statistical analyses of the four measures showed that Irish firms' competitive potential did not differ significantly from that of comparable UK firms. Evidence was provided that improvement in manufacturing process development is all but complete in Ireland, and has led to improvement in general productivity levels. Also, price competitiveness is being maintained by cost gains, including the containment of real wage costs. It would appear, therefore, that Irish industry is reaching a efficiency peak, but is still not relatively more competitive than UK firms. Buckley *et al.* (1988) observe that the terms efficiency and competitiveness are commonly used as substitutes when, in fact, the are complementary; competitiveness contains an element of choice that is not present in efficiency. Thus, Irish firms must now focus on choices in competitive activity that will deliver a sustained edge. The answer may lie in the fourth competitive measure – R&D.

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Contrary to our expectations, the UK had the greater incidence of R&D. Although interview evidence was presented that showed the underlying differences in R&D might not be as pronounced as the postal data implies, nevertheless we suggest this area is Ireland's Achilles heel. There needs to be differentiation between R and D; Irish industry has chosen to invest in development, but this is known to be a short to medium term approach (Scibberas, 1986). Involvement in primary research is more common in UK firms, and it is in this area that Irish firms' must now look for success – the alternative is continuous on-going development. Irish company directors in our interview sample strongly argued that the country's stable currency allowed medium to long term investment to be more easily undertaken. Thus the potential for sustained competitive advantage is in their hands.

It is suggested here that the relationship between the exchange rate and the firm's potential competitive situation may be one of perception rather than reality. However, the confidence inspired by a stable exchange rate has been shown to have positive effect of firm behaviour. The evidence of this research is that business is of the view that the influence of exchange rate stability does, of itself, provide the firm with potentially greater competitive advantage. Ultimately, individual firm strategies will determine whether competitive potential translates into performance.

Notes

1 Knight and Mathieson (1976:96) make use of a dummy variable where the authorities are operating a fixed or pegged exchange rate regime and zero otherwise.

2 i Real labour costs are measured by the ratio of total wage costs (exclusive of non-wage costs) to turnover for 1989, 1991 and 1993, adjusted to labour costs in real terms by applying the index of hourly wages in industry as given by Eurostat.

ii Productivity is measured by output (turnover) per head for 1989, 1991 and 1993.

iii Price is given by a dichotomous variable that has a value of 1 where the respondent firm reports that its main product is more expensive than the price of similar products manufactured by its main EU competitors, and 0 otherwise.

iv R&D is measured on a scale as follows:

None	1
Customer technical services	2
Adaptation of manufacturing technology	3
Development of new and improved products for European markets	4
Development of new products and processes for world markets	5
Generation of new technology for corporate parent	6

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