



# Behavioural influences in Portuguese foreign direct investment

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## ABSTRACT

The paper presents a behavioural economics approach to FDI. It relies on questionnaires and interviews with Portuguese managers to present evidence of the role played by herding, anchoring, mental accounting and other behavioural rules in FDI location decisions. It originates a set of heuristics influencing the direction of FDI flows and it confirms the prediction of the Heiner model (1983, 1989) that the higher the uncertainty faced by decision makers the more frequent will be the use of behavioural rules. The results go beyond neoclassical theory by helping to explain non-maximizing decision-making by managers.

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## 1. Introduction

The behavioural finance literature has shown that investment decisions in equity markets cannot be totally explained by a neoclassical approach (e.g. Shiller, 2003). FDI theory seldom considers the role of managers within an investment decision making process. However, psychologists recognize that managers have several motivational factors that are either intrinsic to their personality or shaped by their environment, and that their choices change with individual personal experience (Frey and Eichenberger, 2001). Although managers have checks on their performance (from competition, shareholders, customers and employees) and thus they often do make their choices more carefully than as if they acted as individuals, they are not immune to moral, cultural and other social influences usually disregarded by economic literature. Hence it is important to understand the different perceptions of managers and their effects on real life FDI location decisions.

The aim of this paper is to enrich the contribution of the behavioural approach to FDI theory by apprehending the economic significance of heuristics in manager's investment decisions. These heuristics are rules of behaviour repeatedly followed by managers that influence firms in the choice of external markets. The approach

followed in the paper gives a central role to the uncertainty faced by managers (the Heiner model) in explaining the existence of behavioural rules.

The following section briefly reviews FDI theory while Section 3 details the applied methodology. Section 4 presents empirical evidence of behavioural rules and Section 5 deals with the role of uncertainty by testing the Heiner model. The paper concludes with the consequences of the use of behavioural rules in FDI decision making.

## 2. A behavioural approach to FDI

Consider a firm deciding whether to invest abroad and where to locate its investment. An economically rational decision-maker attempts to maximize the net present value of the difference between revenue and costs when answering these questions. These are the two key variables for a decision and economic literature presents several explanations based on potential revenue and costs for FDI to occur.

Multinational enterprises (MNE), when making FDI location decisions within imperfect markets, seek to improve their revenue stream in several ways. They use specific advantages (such as product differentiation, managerial and marketing skills, innovation and technology or scale and agglomeration economies) over local competitors in the host market to compensate the additional costs of investing abroad. The will to minimize transactional costs and thus to be more cost-efficient is also used by the FDI literature to explain location decisions (Williamson, 1981). Buckley and

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Casson, Hennart, Caves and others further developed this approach by stating that the resulting power of market imperfections (originating in less-tradable goods such as “research and development”, knowledge or intangible assets such as brands) are an incentive for internalization and thus for the formation of MNE (Caves, 1996).

Further explanations of location decisions are mainly related with the fragmentation of production processes by single-plant firms into different stages based on different relative factor endowments, and thus prices, across countries. In this case, vertical FDI tends to be unidirectional, from richly endowed countries to cheaper labour endowed locations (Blonigen, 2005). The proximity-concentration model (Horstmann and Markusen, 1992; Brainard, 1993) explains multi-plant MNE and two-way horizontal FDI when it becomes relatively less expensive in comparison with exporting.

The above explanations usually assume firms and managers as rational profit maximizers where uncertainty is often reduced to risk so that rationalization conditions can be developed. The traditional behavioural approach to FDI, on the other hand, states that the relevant factor for the location decision is *psychic distance*, that is, “. . . the sum of factors preventing the flow of information from and to the market. Examples are differences in language, education, business practices, culture and industrial development” (Johanson and Vahlne, 1977, p. 24). In this approach, FDI location decisions require a huge amount of information and the decision making process involves a lot of different people that, directly or indirectly, influence the final location. Moreover, they comprise different steps where a large number of small sequential decisions are made during several months before the final decision to immobilize capital for several years is reached (Aharoni, 1999). While the decision making process evolves, environmental variables are permanently changing in unpredictable ways and decision makers are themselves affected by rather different events, thus giving uncertainty a central role. Uncertainty is here seen differently from expected utility theory where it is reduced to risk acting as a constraint to maximization. Uncertainty is “the absence of ability to decipher all of the complexity of the environment; especially one whose very structure itself evolves over time” (Heiner, 1983, p. 569). It includes, besides risk, “nonreplicable uncertainty or even ignorance” (Heijdra, 1988, p. 83) present in most situations faced by decision makers. These cannot be mitigated and prevent the assignment of probabilities for each alternative in the decision making process (Knight, 1921).

In the behavioural approach, each FDI location decision comprises not only the “economically rational” part but also the “behavioural” part, where perceptions and other cognitive features of managers, in an uncertain context, are included (Katona, 1975). Therefore, a behavioural approach should consider how the extrinsic and intrinsic cognitive characteristics of managers, the basis of their changing expectations, influence each step of the decision-making process.

In the presence of uncertainty, managers tend to rely on behavioural rules or heuristics, that is, simplifying strategies to reduce complexity that systematically deviate from the predictions of unbounded procedural rationality (Frey and Eichenberger, 2001). Managers are thus subject to errors and “anomalous” behaviour in decision making. Both may be corrected. But while errors are single deviations from economic rationality explained by the limited capabilities of human beings, heuristics are sequential deviations represented by systematic and predictable biases arising from behavioural rules. In a dynamic perspective, when managers are finally able to correct their anomalous behaviour the environment has changed in a significant way and, because a changing context modifies their perceptions, they have to permanently re-start their personal learning process to cope with the new environmental conditions. All heuristics that are recurrent and persist during a certain period of time because they are not immediately corrected through learning or incentives may be considered as behavioural

**Table 1**  
Taxonomy of behavioural rules in FDI decisions.

Type time	Intrinsic	Extrinsic
Past	Learning, hindsight bias, sunk costs, mental accounting, break-even effect, house money effect	Historical anchoring, cultural anchoring
Present	Framing, representativeness	Availability, feelings, fairness, herding, cascading, signalling, false consensus bias, reputation-based herding, inter-expert inconsistency
Future	Strategic inconsistencies Overconfidence, confirmatory bias	Strategic inconsistencies

rules (Arrow, 1996). The Heiner (1983, 1985, 1989) model, theoretically applied to FDI in Hosseini (2005), emphasizes this “rigidity” in decision-making by underlining the objectives and motivations of any individual, e.g. managers investing abroad, in a way that allows the identification of relevant durable patterns in his behaviour.

The behavioural literature has shown that rules of behaviour do exist in investment operations or similar situations: Mental accounting (Thaler and Johnson, 1990); Strategic inconsistency in firms’ decisions (Schwartz, 1998); Overconfidence (Hilton, 2003; Malmendier and Tate, 2005) and confirmatory bias (Rabin, 1998); Anchoring (Frey and Eichenberger, 2001; Grinblatt and Keloharju, 2001; Beckmann et al., 2008); Availability (Tversky and Kahneman, 1982); Herding (Banerjee, 1992; Zwiebel, 1995; Kinoshita and Mody, 2001); Fairness (Kahneman et al., 1986). Many of these heuristics have been found in financial markets and, although the actions and the outcomes of these markets are much more easily observable than in the case of foreign investment, some may be extrapolated to explain information collection, selection of alternatives and the final FDI location decision.

Table 1 presents the taxonomy of behavioural rules typified in accordance with their time reference, that is, related with past or present events or concerning expectations about future developments (rows), and by its source of motivation, the intrinsic or extrinsic dimension of cognitive characteristics (columns). This is not an exhaustive list of all behavioural rules but of those that could apply to FDI operations. Given the large number of heuristics the paper is focused only on a subset.

### 3. Methodology

#### 3.1. Data

In order to find evidence of behavioural rules in FDI location decisions, a database was built from information collection, and interviews and questionnaires applied to managers of the largest 50 Portuguese firms with FDI. A total of 112 operations abroad were considered representing at least 6% of the total FDI (Banco de Portugal, 2005).<sup>1</sup> These operations cover a range of industries: agriculture, manufacturing, energy, construction, financial and services. The common denominator is that all operations represent part of a firm’ production capabilities installed abroad. The reason is that the decision to invest abroad has to be very well thought and the uncertainty associated significantly greater than, for example, the opening of a representative office (usually a support for exports). Managers included in the study were directly responsible

<sup>1</sup> The value is higher but Banco de Portugal did not provide information on the number of FDI locations without a productive component, such as representative offices.

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