

# Gender differences in economic behavior: a profiles study of 16 Latin American countries.

Diferencias de género en comportamiento económico: un estudio de perfiles de 16 países latinoamericanos.

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## Abstract

*The difference in the behaviour of women and men has been a topic of research with increasing emphasis in recent years. The study was conducted with samples of people from 16 Latin American countries, using correlations and factor analysis to explore relationships between the 4 profiles of economic human action, using a praxeometric test called HAT, with categorisation between women and men. Results evidenced that women tend to act economically with a profile towards innovation and description of the current situation through reflective appraisal and emotional intelligence.*

**Key words:** Human action, economic behaviour, praxeology, rationality, women, men.

## Resumen

*La diferencia en el comportamiento de mujeres y hombres ha sido un tema de investigación con mayor énfasis en años recientes. El estudio se realizó con muestras de personas de 16 países de Latinoamérica, se utilizan correlaciones y análisis factorial para explorar relaciones de los 4 perfiles de acción humana económica, utilizando una prueba praxiométrica denominado HAT, con categorización entre mujeres y hombres. Resultados evidenciaron que las mujeres tienden a actuar económicamente con perfil hacia la innovación y descripción de la situación actual a través de la valoración reflexiva e inteligencia emocional.*

**Palabras clave:** Acción humana, comportamiento económico, praxeología, racionalidad, mujeres, hombres.

## I. INTRODUCTION

In recent decades, several research studies have been conducted related to the differences in actions and behaviour of women and men or preconceptions about these (e.g., Merchant, 2012; Schmitt, Long, McPhearson, O'Brien, Remmert, and Shah, 2017; Koveshnikova, Tienarib and Piekkaria, 2019).

This paper has been developed according to a sample in which people of both sexes were classified. The variable gender has been investigated in various fields of knowledge; in several of them, additional categories to the feminine or masculine are considered. To respectfully treat different approaches, gender is considered according to the self-identification of the participants. Therefore, sex and gender are categorised in a similar way.

Hofstede (2011) based on several of his previous studies, refers to one of the cultural dimensions. Masculinity is conceived with assertiveness and ambition while femininity is associated with modesty and caring. Merchant (2012), about gender differences in communication styles, influence tactics, and leadership styles, describes research and stereotypes on this topic; women are relationship and people-oriented, men are task and result-oriented.

Schmitt et al. (2017) conducted an extensive analysis of gender and different constructs and perspectives, on career interests there are consistent differences, women more to people-oriented professions and men to things-oriented professions. Bursztyn, Fujiwara, and Pallais (2017) conducted a study on the changes in expectations, roles, and decisions according to their single or non-single status in women and men.

With a sample of more than 15,000 entrepreneurs in 43 countries, Brieger et al. (2019) demonstrated, among other findings, that gender influences entrepreneurial activity in their approach; indeed, women are more likely to act for the benefit of society than men with adequate institutional support. Koveshnikova et al. (2019) in their review of gendered social spaces mention the predominance of certain "masculine values" in multinational corporations, such as competitiveness, assertiveness, risk-taking, and capitalisation of opportunities. Zenger and Folkman (2019) report findings that most key capabilities, 17 out of 19, of their leadership model are higher in women, e.g., analysis and problem solving, and innovation, as relevant to this research.

Gannouni and Ramboarison-Lalao (2019), in a study with a sample of 371 future managers, concluded that in countries classified as feminine or masculine, according to Hofstede's cultural dimensions, "the results did not reveal significant differences in leadership between men and women" in relation to that categorization. In other words, countries with values towards masculinity, a high relationship of male leadership, and likewise, countries with values towards femininity, a high relationship with female leadership. Before, Ogliastrri et al. (1999), in their *Globe Study*, presented the preference of many Latin countries studied towards a culture with a greater tendency towards empathy or what is called feminine. It could be a starting point towards an exploratory explanation of the result of this investigation.

Weidmann, et al. (2023) investigated possible age and gender differences with eight known tools related to the definition of narcissism. They remark the large sample of more than 250,000 people, with which they concluded that narcissism scores are higher in young adulthood and men. Asymmetrical results were produced on emotional intelligence EI subdimensions in a study with a sample of university students. Female students scored higher overall on interpersonal emotional skills and specifically on the ability to perceive others' emotions and resilience, on resilience items related to personal competence and tenacity, control and spiritual influence. Students scored significantly higher on intrapersonal emotional skills, indicative of regulating their own emotions and controlling expressions of their own emotions (Sojer, Kainbacher, Hufner, et al., 2024).

Results on gender differences in labor mobility in Spain show that this is not an intrinsic characteristic of women, but rather a pattern influenced by certain cultural dimensions, given that this pattern of lower labor mobility, and therefore opportunities, is not seen in women with a higher academic level and without family relations (Casado-Díaz, Simón-Albert & Simón, 2023). In line with this study, Nobel laureate Claudia Goldin (2023) contributed research on wages and labor participation, which remarked on the influence of the contraceptive pill, technology and changing social norms. Women start from a small salary gap, which widens after the birth of their first child and is not reduced thereafter.

Mises published in 1949: *The Treatise on Economics - Human Action*, in which he develops his definition of economic human action with its prerequisites.

Acting man is eager to substitute a more satisfactory state of affairs for a less satisfactory. His mind imagines conditions which suit him better, and his action aims at bringing about this desired state. The incentive that impels a man to act is always some uneasiness... But to make a man act, uneasiness and the image of a more satisfactory state alone are not sufficient. A third condition is required: the expectation that purposeful behavior has the power to remove or at least to alleviate the felt uneasiness. In the absence of this condition no action is feasible... (Mises, 1998, p. 14,15).

Regarding the term rationality, its interpretation has been made according to different perspectives, the author defines it as follows.

Human action is necessarily always rational... When applied to the ultimate ends of action, the terms rational and irrational are inappropriate and meaningless. The ultimate end of action is always the satisfaction of some desires of the acting man. Since nobody is in a position to substitute his own value judgments for those of the acting individual, it is vain to pass judgment on other people's aims and volitions. No man is qualified to declare what would make another man happier or less discontented (Mises, 1998, p. 18,19).

Frederick (2010) distinguishes between two types of rationality, which he calls authoritarian and libertarian. He argues that the first of these is meaningless, while the second opens the possibility of knowledge through questioning, contrasting, and refutation; in the purest Popperian style.

Rationality is often confused with perfect logic in the behaviour of people in economics, however, from the perspective of the Austrian school and the neoclassical approach of *homo economicus*; man can be inconsistent in his logic and consistent in his rationality. The Nobel laureates Kahneman (2002) and Thaler (2018) developed their theoretical proposals based on economic behaviour, the former clearly understands it (Sieroń, 2018), other authors investigate it from their perspective such as Ariely (2017) and Pinker (2021), the latter has made an important contribution clarifying ideas about rationality.

Simon (1972), in his bounded rationality theory, relates a non-optimal decision to a not fully rational behaviour. Mises (1998) is clear and rigorous in that action (e.g., decision) can be distorted by asymmetric information or emotional pressure, however, it does not stop acting to improve its current state. As mentioned, and although it is difficult to qualify an external as a rational or irrational act of a person, the evident act of self-inflicting physical or mental harm that causes negative or harmful consequences is not the field of study of economics but rather of psychology or psychiatry.

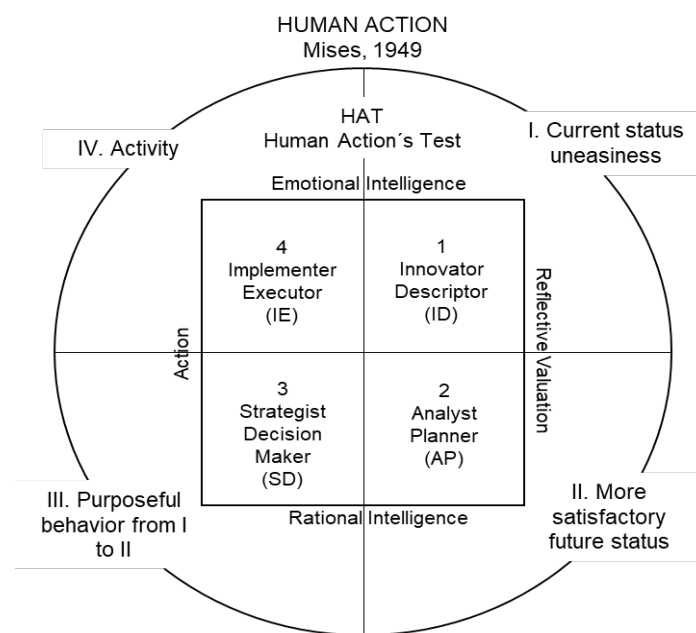
Gasparski and Szaniawski (1977), in their review, state that praxeology and decision theory, analyse and have similar approaches. *Polish praxeology*, whose first point of reference is Kotarbinski (1955), investigates, among others, *effective action*, praxeological organisation, especially by Zieleniewski (1964, 1969), the so-called *social engineering*, according to

the authors, of praxeological origins. In this article, Lange (1959) is mentioned with his proposal to relate praxeology to economic activity and specifically to decision theory (and his criticism of the "reductionism" of Mises' concept, 1949); additionally, Kauffman (1968) and Koziellecki (1975); the latter distinguishes the theory of rational or optimal decisions with praxeology as a normative element. Interesting is the authors' distinction of philosophical and practical origins; the main interest of praxeology is intentional human action itself; decision theory is only concerned with certain kinds of actions. They mention efforts to develop praxeometric approaches by Gasparski (1970), Nowakowska (1970), Dorosinski (1972), and Bojarski (1975).

Batemarco (1985) recommends revaluing the praxeological perspective given that the positivist approach tries to explain phenomena, not their processes. The observation of economic acts with empirical evidence will facilitate explanations based on contrasts with attainable objectives, "albeit modest", praxeology could restore the lost prestige of economic science. Klein, Biesenthal and Dehlin (2015) propose praxeology as a theoretical framework to strengthen and broaden the field of knowledge of resilient project management given its complexity and dynamics.

Lascano Corrales (2015) proposes a model that defines 4 stages, based on the concept of praxeology by Mises (1998) and the decision-making model by Simon (1972), which are aligned with the 4 profiles of the HAT. According to its author, HAT© - Human Action's Test is a praxeometric instrument. It has two vectors, on the Y-axis it observed reflective valuation (RV) and action (A), and on the X-axis emotional intelligence (EI) and rational intelligence (RI). He clarifies the difference between emotionality and emotional intelligence (Mayer and Salovey, 1997), so as not to fall into the field of psychology and to remain rigorously in the field of praxeology, as the identification, assessment, and capitalisation of choosing between own and third-party emotions, rational intelligence as the ability to identify, assess and capitalise information that projects a better future state than the current one, based above all on critical thinking (Elder and Elder, 2002), on the basis of the etymological origin of intelligence; *inter* and *legere*, which means to choose between.

**Figure 1. HAT test structure.**



Note. Human Action Test Model. Lascano Corrales (2015).

HAT is conceived as a tool that identifies economic action as a four-stage cycle. When taking the test, one chooses between binary options related to the dimensions of the axes; reflective valuation (RV) or action (A) on the X-axis and emotional intelligence (EI) or rational intelligence (RI) on the Y-axis. The result is a graph with percentages in the 4 profiles; however, the profile is identified through the highest of these.

Innovator Descriptor (ID), which prefers emotional intelligence (EI) and reflective valuation (RV), explores, idea and delimits the current situation. Analyst Planner (AP), prefers reflective valuation (RV) and rational intelligence (RI), organises, compares, and projects the future situation. Strategist Decision Maker (SD), prefers rational intelligence (RI) and action (A), chooses, decides, and schedules resources. Implementer Executor (IE), prefers action (A) and emotional intelligence (EI), implements, makes things happen, and moves forward (Lascano Corrales, 2017; 2022).

Finally, it should be emphasised that praxeology studies the action itself, not the underlying elements and relevance of the action. In Aristotelian terms, it focuses on act and potency; it does not aim to attain *phronēsis* given its unique and personal appraisal. The results of HAT profiles are considered as the starting point of a process through which the achievement of efficiency, efficacy, and effectiveness will be projected. Human action, considered as an irreducible principle, black box, independent or exogenous variable, will facilitate rapid decision making in economics and derived activities such as management or entrepreneurship. Failure to do so will produce problems such as infinite regressions (Roldan Corrales, 2015), super holism, confusion between correlation and causality and failure to achieve what many researchers strive for as the highest level of knowledge (and art), abstraction to arrive at parsimony.

Corrales (2022) correlated the balance of profiles of the referred test with their return on investment, in more than 20 teams from three countries, teams that have more profiles towards decision and execution than towards ideation and planning have higher returns. Corrales, Rodriguez & Armijo (2022), used samples of executives from 16 Latin American countries to determine a ranking of the distribution of economic behaviour profiles. Corrales, Moya & Fiallos (2023), applied the HAT test on entrepreneurs without business training and later when they completed their training stage, the results showed that in the case of men there were statistically significant changes in their profiles while in women there were not.

Regarding women and men in economic activities, there are numerous examples of various kinds. Strictly in the sense of epistemology, the present research is not comparable with other research; seeking to sketch some analogy of activities in economics with HAT's results, without falling into the error of the fallacy of association, papers will be referred to that will facilitate the subsequent outline of certain conclusions or, better still, recommendations for future research.

## II. METHOD

The sample was conducted between July 13 and December 23, 2023 ( $n = 1184$ ), 707 women (59.7%) and 477 (40.3%) men from the following countries: Argentina 53, Bolivia 35, Chile 50, Colombia 326, Costa Rica 60, Ecuador 168, El Salvador 39, Spain 33, United States 82, Guatemala 57, Honduras 43, Mexico 40, Nicaragua 38, Panama 59, Peru 70, Venezuela 31. Samples of less than 30 people from the Dominican Republic, Puerto Rico, Uruguay, and Canada were not included, and Latinos who identified themselves as citizens of the United States were included in the sample.

**Table 1. Country samples and profiles.**

Sample demographics				Profiles			
Country	n	women	men	ID	AP	SD	IE
Argentina	53	34	19	11	10	6	26
Bolivia	35	15	20	2	17	16	0
Chile	50	36	14	9	9	11	21
Colombia	326	204	122	48	130	64	84
Costa Rica	60	37	23	12	25	10	13
Ecuador	168	95	73	24	74	39	31
El Salvador	39	25	14	10	22	5	2
España	33	19	14	1	14	17	1
Guatemala	57	29	28	12	22	12	11
Honduras	43	26	17	4	32	4	3
México	40	21	19	3	16	8	13
Nicaragua	38	25	13	9	9	11	9
Panamá	59	35	24	8	26	13	12
Perú	70	37	33	20	20	16	14
USA	82	45	37	5	29	16	32
Venezuela	31	24	7	10	10	6	5
Total	1184	707	477	188	465	254	277

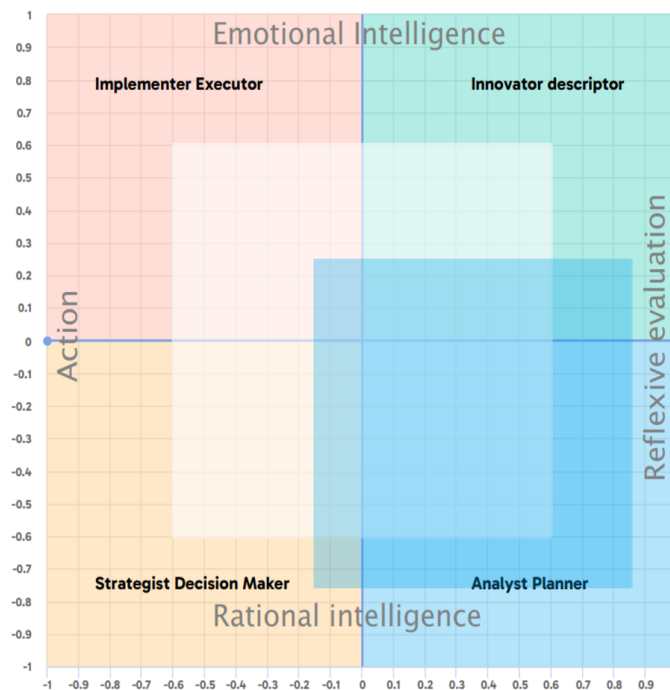
Note. Author source.

Normality tests with KS and SW in samples with less than 50 data ( $p < .05$ ) (Wei, 2022), and Benford's law of randomness (Kaiser, 2019) were performed ( $r = .97$ ), Cronbach's alpha  $\alpha = .937$  (Posso Pacheco y Bertheau, 2020), SPSS 21 was used for processing. Summary data is presented in the Table 1.

The instrument that identified economic behaviour was HAT V.5.0., to identify sex, binary variables were assigned; women 1 and men 0.

The delimitation of this research is to investigate the general trend of the process of economic behaviour of men and women, the country samples are mentioned for context and information on their representativeness, therefore, other variables are not particularised or explained in this study given its epistemological pertinence and purpose.

Figure 2. Test HAT, V. 5.0. ©



Note. HAT Global © source.

### III. RESULTS

Overall profile results were ID (15.9%), AP (39.3%), SD (21.5%) and IE (23.4%). A first approximation was made through a convergent and discriminant analysis identifying significant correlations between variables ( $p < .01$ ).

Table 2. Intercorrelations (n = 1184).

	women	ID	AP	SD	IE
women	1				
ID	.208**	1			
AP			1		
ED	-.197**	-.897**	-.151**	1	
IE	.078**		-.943**		1

\*\* correlation is significant at the level 0,01 (bilateral).

Note. Author source.

Women are positively related to ID profile (.208) and inversely related to SD (-.197), ID profile is negatively related to SD (-.897) and similarly, AP is negatively related to IE (-.943).

Subsequently, Principal Component Analysis with varimax rotation factor matrix carried out, the total variance explained in 2 factors was 78.9%.

**Table 3. Principal Component Analysis: Varimax rotated factor matrix.**

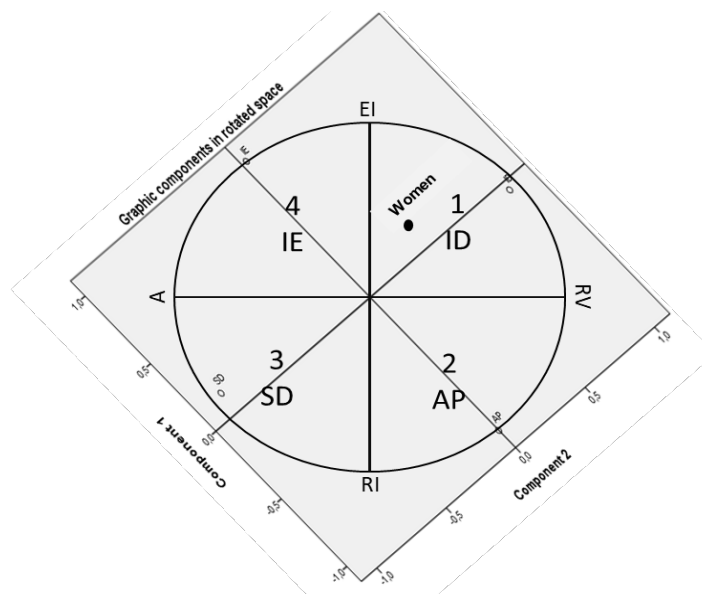
	Component	
	1	2
Women	<b>0.411</b>	0.015
ID	<b>0.953</b>	-0.055
AP	-0.002	<b>-0.984</b>
SD	<b>-0.947</b>	0.135
IE	0.031	<b>0.979</b>

Note. Author source.

The first factor (eigenvalue = 2.059; 41.17% variance explained; n=3) grouped the variables women (.411) with ID profile positively (.953) and negatively with SD profile (-.947).

The second factor (eigenvalue = 1.886; 37.72% variance explained; n=2) grouped AP profile (-.984) with IE profile (.979).

**Figure 3. Graphical results.**



Note. Author source.



In the HAT calculation algorithm that identifies the 4 profiles, the input variables are the responses between the coordinate axes, this research was carried out based on the output variables or profiles, however, it is evident that in the graph autovectors were configured with minimal deviations between inputs or axes and outputs or profiles. This shows statistical consistency in the interpretation of the theoretical approach to the structure of the instrument used.

#### IV. DISCUSSION

Certain references were made to gender or women and men in economic activities with the risk of falling into theoretical nihilism in areas of knowledge in which the authors are not expert. Nevertheless, those have been emphasised in articles of certain characteristics to the approach and praxeological instrument used.

The highly positive relationship of women with the ID profile is evidence of a preference for two dimensions of the coordinate axes, emotional intelligence, and reflective valuation. The descriptor innovator profile, as the name suggests, is particularly good at exploring and describing the current situation with its problems and opportunities. It should be noted that there is a high and negative relationship with the Strategic Decision Maker (SD) profile, which acts based on rational intelligence and action.

The results of this research could provide some clues to understand Merchant's (2012) findings in the sense of women's communication orientation, influence and leadership styles towards relationships and people, as well as men's towards results and tasks. In the same sense for those of Schmitt et al. (2017) in which the interests of professions were people-oriented in women and things-oriented in men. In line with the above, Brieger et al. (2019) showed that motivations for entrepreneurship are related to social benefit for women and institutional support for men. Another example of concordance of results are those of Zenger & Folkman (2019) who found that key capabilities of women's leadership include innovation and problem-solving analysis.

From other perspectives, the results of Weidmann, et al. (2023) showed that young adult men have comparatively higher scales of narcissism, while (Sojer, Kainbacher, Hufner, et al., 2024) showed that women have greater focus and capacity on interpersonal competencies, perceive others' emotions better, are more resilient and tenacious, men are more oriented towards intrapersonal competencies, greater self-regulation of their emotions and the expression of these.

The gender gap and labour mobility are a relevant issue, Bursztyn, Fujiwara, & Pallais (2017) show that changes in expectations, roles and decisions are produced according to the status of single or married in both genders but it has a greater impact on women. This could be due to the predominance of certain masculine values in corporate culture (Koveshnikova et al., 2019), which are corroborated in the study by Casado-Díaz, Simón-Albert & Simón (2023), who found that labour mobility is more dynamic in single women with higher professional levels. The development of these aspects and others were extensively elaborated by the 2023 Nobel laureate in economics Claudia Goldin.

#### V. CONCLUSIONS

HAT, being a test of economic behaviour, does not label and is adaptable and mutable according to the needs of individuals and teams. It identifies the way of acting in the four stages of human action with situational emphasis on one of these. Therefore, it is a neutral and useful instrument for the management of companies, projects, or entrepreneurship. The main objective of this article was to present specific results for men and women using the praxeometric or human economic action test.

The key finding of this study is the tendency towards innovation in describing the current situation for women and precisely the opposite for men, which could translate into gender-differentiated teaching and learning, change management or knowledge management strategies. This could lead to more effective management, communication and learning processes.

The limitations of the research are specific to the purpose of the research, which was to identify the main difference in economic behavior between men and women. Particularities through other types of explanatory variables could be explored to identify the main differences in economic behavior between men and women.

Future research on economic behavioural profiles with the development of high- performance teams in remote work or four stages of economic human action with AI phases is recommended.

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