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BETWEEN STRATEGIES AND ECONOMIC RATIONALISM, CONTRIBUTION OF ALBERT O. HIRSCHMAN

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INTRODUCTION

Albert Otto Hirschman was a development economist, philosopher and resistance fighter. Thanks to his methods Hirshman promoted economic and social growth; he was an incredible observer of the world so much so that he changed it.

During his long life Albert O. Hirschman explored a vast range of topics, he did not deal with traditional economic models but his school of thought involved the complexity of human behavior and social reality. The *nucleus* of his philosophical thought is based on the trespassing, which means *"stepping over the borders between one discipline and another, without seeing them as rigid divisions"* [1].

Hirschman's life can be divided into fourth phases. He was born on the 7th of April 1915 from a German Jewish family. In the 1932 he started university in Germany, however, because of the new Hitler government, he was forced to finish his studies abroad (Paris, London, Trieste).

After having finished his study, he firstly went to Barcelona, where he served in the Spanish Civil War, and secondly he served the French underground, helping thousands of anti-fascists to escape. In 1941, he crossed the ocean and arrived in the United States, where two years after in 1943, he enlisted himself in order to become part of the U.S.Army.

In 1952, he moved to South America, where Hirschman served as a financial advisor the National Planning Board of Colombia, and then 7th became a private economic counsellor in Bogota.

He spent the last phase of his life until his death (Ewing, 11th December 2012) helding a series of academic appointments in economics at the most illustrious American's university as Yale University (1956-58), Columbia University (1958-64), Harvard University (1964-74), and finally the Institute for Advance Study (1974-2012).

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[1] "Albert Hirschman. Entrevista sobre su vida y obra", in IDES (1996, p. 658). See also Hirschman's last book, Crossing Boundaries, whose title reflects his defence of these views and his very special intellectual makeup, with his propensity for subversion and self-subversion (Hirschman, 1998).

Hirschman's death has symbolized the end of that entourage of thinkers and economists, who have characterized the 20th century. Among them we can find prestigious names as John Maynard Keynes, Irving Fisher Alfred Marshall, and Franco Modigliani. Nowadays, their way of thinking and their models still represent the origin of our modern economic system. Hirschman's ability and point of view, was trying to not enclose a concept into a specific area, but instead, he tried to integrate his ideas in a wide range of fields. He believed that this was the only way of discovering related topics.

Looking closely at the Hirschman's biography, it is possible to read important works as *"Rhetoric of Reaction: Perversity, Futility, Jeopardy"*, *"Shifting Involvements"*, *"The Passions and the Interests: Political Arguments For Capitalism Before Its Triumph"*, *"Journeys toward Progress: studies of economic policy-making in Latin America"*, and *"Exit, Voice, and Loyalty: Response to Decline in Firms, Organizations, and States"*.

The first book, published in 1991, is a kind of rhetoric conservatism in opposition of the social change of that time. Alfred Otto Hirschman suggested a way to grasp the kinds of arguments made by conservatives about proposals for change. He drew examples from three periods of vociferous reaction to social change: *perversity, futility, and jeopardy.*

In the *perversity thesis*, every purposive action that aims to improve the social, economic, and political order only serves to deteriorate the condition which was meant to redress.

According to the *futility thesis,* every changes result will not have any positive improvement, so that it will be useless to purpose any kind of development.

The third and the last, is the *jeopardy thesis,* which says that the cost of proposed reform and change is too high, in respect to previous changes.

The second book, "*Shifting Involvements"* published for the first time in 1982, summarize a theory that explains the reason why modern societies seem to oscillate between periods of intense preoccupation with public issues and of almost total concentration on private consumption.

The third book which is *"The Passions and the Interests: Political Arguments For Capitalism Before Its Triumph"* Hirschman reconstructs the

intellectual climate of the 17th and 18th century. Hirschman gives us a new interpretation for the rise of capitalism, one that emphasizes the continuities between old and new, in contrast to the assumption of a sharp break that is a common feature of both Marxian and Weberian thinking.

Another book of Hirschman is "*Journeys toward Progress: studies of economic policy-making in Latin America*" that examines three economic policy problems in detail: Brazil's actions to alleviate the chronic economic backwardness of its drought-ridden and stagnating northeastern provinces, Colombia's attempts to improve patterns of land use and land tenure, and Chile's experience with recurring inflation. He criticized the overconfident belief that all problems were inherently solvable, as well as the prevalent notion of the period in Latin America that reform could be achieved only by opposite processes of violent revolution or of peaceful change.

The last book, which is probably considered the most famous one, *"Exit, Voice, and Loyalty: Response to Decline in Firms, Organizations, and States" was* published in 1970. *"Exit, Voice, and Loyalty* is an elegant and attractive piece of writing"[2]. The main assumption at the starting point of the analysis is that there is a comparative or absolute worsening in the quality of the product or service provided by a firms, organizations, or states.

The objective of this paper is to demonstrate how the Hirschman study about Exit, Voice and Loyalty is such an easy concept that can be apply to any kind of realities and dimensions. I will divided my thesis into 4 chapters.

In the first one I will discuss about the basic definition and concept of Exit, Voice and Loyalty idealized by Hirschman in his major work "*Exit, Voice, and Loyalty: Response to Decline in Firms, Organizations, and States"*.

In the second chapter I will talk about the interaction between Exit and Voice as they are inversely related, as Loyalty has the power to create a balance between the voice option and the exit option.

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2 Albert O. Hirschman, *Exit, Voice, and Loyalty: Response to Decline in Firms, Organizations, and States* (Cambridge, Mass.: Harvard University Press, 1970).

In the third chapter I will deal with a case study which talks about the worsen relationship that happen when in an organization, initially composed by managers and standard employees, there is the introduction of a third player who are the nonstandard employees.

Finally the last chapter I will demonstrate through mathematical formulas that is possible to give a specific value and measure to the three strategies: Exit, Voice and Loyalty.

Chapter 1

THE CONCEPTS OF EXIT, VOICE, LOYALTY

The most famous book of Albert Otto Hirschman is *"Exit, Voice, and Loyalty: Response to Decline in Firms, Organizations, and States"* published in 1970*.* In his book, Hirschman, describes the theory that has as purposes of the study the three strategies that the consumers or the employees can adopt when the value and the quality of goods and services provided by firms, organizations or states decrease.

As mentioned above, the starting point of the Hirschman's analysis is the assumption that exists an absolute or comparative deterioration in the quality of the product or service provide by an organization. According to his model the consumers can reply with two different strategies, "Exit" or "Voice".

These two are inversely related, which means that the more likely costumers are like to choose the Exit option, the less likely are to Voice complaints and vice-versa.

In his theory there is a third significant concept that plays a crucial role, the "Loyalty". So, the greater the Loyalty of the costumer is, the more likely it is that they will protest (Voice) to the management when things get worse. The same idea can be summarized with the following statement, the tendency of using voice depends on how much a costumer is Loyal to the firm, which is in other words, the trade-off between using Voice or Exiting. Alternatively as Caryl Rusbolt suggests, one can cast Loyalty as some other scholars have done, such as *"giving public and private support to the organization"* or *"practicing good citizenship"*.
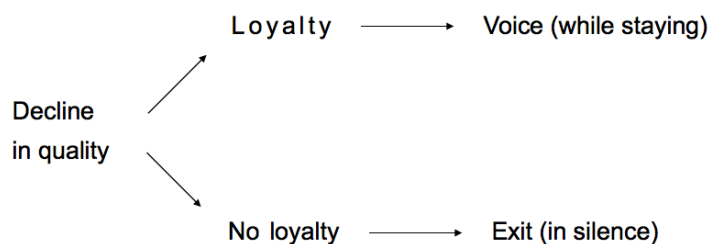
At this stage an european philosopher includes three criticisms, the first one is that "*the concept of Loyalty on the ground is an ad hoc equation filler and therefore not a significant phenomenon*".[3]

The second criticism says that a deterioration in the quality of performance of goods is one of the reasons why people might form this belief.

The third criticism states that "*Alfred Otto Hirschman has collapsed two separate choices into one. There is a choice between Exit and non-Exit and a further choice between Voice and Silence*"[4].

This is the Barry's version of the Hirschman's model.
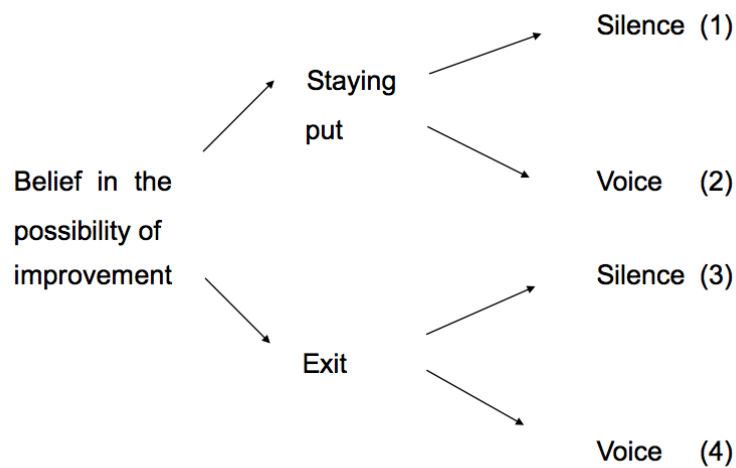
1.1 Exit

The first concept that Hirschman takes into account is the "Exit" strategy. The initial step of this model involves the concept of "slack," which means if a firm does not essentially produce at its maximum efficiency, it will lead to a deterioration of the quality of its goods.

This deterioration makes the consumer less likely to buy that product; and if there is a compelling substitute product the consumer may find this alternative goods/services more attractive. On the contrary,

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[3] Barry, "Exit, Voice, Loyalty", pp. 95 and 97.

[4] Barry, "Exit, Voice, Loyalty, p.91.

instead, if the consumer does not find any alternatives she/he will may decide to reduce the consumption of that type of good or she/he will take an extreme decision: to give up on it. This is what in Hirschman's words is defined as Exit.

What is written above leads to a loss of revenues and so even a great loss of profits of the firm or company.

So, the Exit option can be considered by the producers as a feedback regarding its performance.

The Exit is so important when is considered in conjunction with Hirschman's second fundamental concept, which is the Voice.

1.2 Voice

The Voice is the second fundamental concept of Hirschman, it is defined as any attempts to change, rather than to escape from an objectionable state of affairs.

In this case, if a firm or a company produces with a poor efficiency causing a loss of the value of a product the consumer does not leave seeking better alternatives but she/he stays and expresses her/his ideas trying to give a support for a better production.

At this stage producer or the manager can react in two different ways when the consumer or the employee decides to use the Voice strategy.

"*Firstly, it will be remembered that the sort of product deterioration that we are talking about does not save the producer anything, since it results from inefficiency which, because of the slack market, he may not even realize exists. He may thus thank the consumer for Voice and, in order to reduce the risk of Exit, set thinks to rights as soon as possible. As far as recurrent costs are concerned, this is more expensive than continuing to produce the inferior product. Certain 'climb back' costs will, however, be involved. In other words, there may be little resistance to Voice, and the probability of even*

quite a small quantity of it having the desired effect may be very high".[5]

Secondly *"the producer does not thank the consumer for it. This will occur when the climb back costs are higher than the expected benefit to be gained by staving off Exit - for example, when efficiency falls as plant ages but when the cost of replacement is unacceptable high… ..A consumer can of course use his Voice to threaten Exit, but this only leads us into an inverse Olson problem[6] , since this treat will only be heeded if the consumer is important, so that his Exit would inflict losses that would outweigh the cost of climb back. Voice in these circumstances is of no use to the little man. If I, the man in the street, shout at Brewitt and Fizz that I shall stop buying their beer unless it is once more sold from the wood, I doubt whether they would take any notice. If, however, I shout it in public, they may be scared that too many others will her me".[7]* In fact according to Hirshman's idea, different people respond differently to the worsening in the quality of a goods/services.

1.3 Loyalty

"*Those with greater loyalty are more likely to stay and try to change the organization from within. This is particularly true if they believe that their efforts have the power to influence the organization* (Hodson 2011)*. Entry costs further heighten the likelihood of choosing voice rather than exit; those who have endured difficulty in*

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[5] Michael Laver, 'Exit, Voice, and Loyalty' Revisited: The Strategic Product and Consumption of Public and Private Goods. British Journal of Political Science, Vol. 6, No. 4 (Oct., 1976) p. 464.

[6] Olson Problem is a theory of political science and economics of concentrated benefits versus diffuse costs. Its central argument is that concentrated minor interests will be overrepresented and diffuse majority interests trumped, due to a free-rider problem that is stronger when a group becomes larger.

[7] Michael Laver, 'Exit, Voice, and Loyalty' Revisited: The Strategic Product and Consumption of Public and Private Goods. British Journal of Political Science, Vol. 6, No. 4 (Oct., 1976) p. 465.

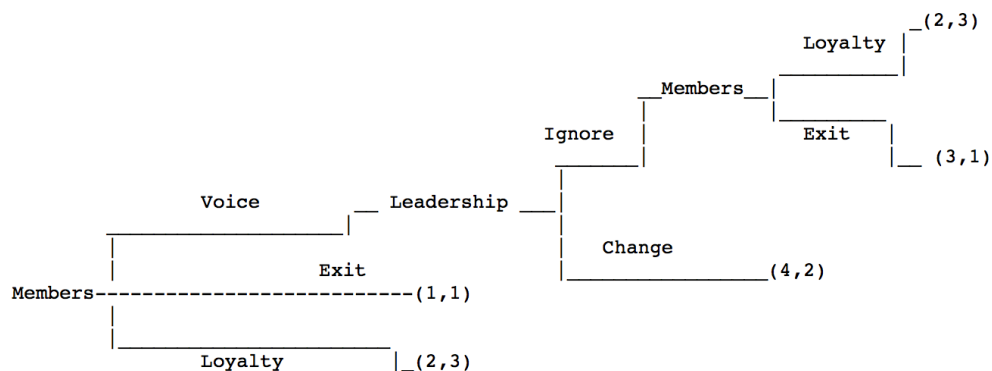*joining the organization will be less likely to discard their membership lightly* (Hirschman 1970)".[8]

Loyalty is the key condition in order to understand and explain when Voice is the most useful strategy to adopt instead of Exit and vice versa. Loyalty can be seen with two slightly different points of view, which are Loyalty as third strategy or as a variable which may affect the final decision of the costumers between Voice and Exit.

Hirschman considers the presence of Loyalty as a factor which can influence the action of the consumers.

1.4 Graphical Explanation

In order to clarify the above mentioned concept I will introduce two graphs.

In the first one I will analyze a structure in which the member prefer to remain within the organization:

```
                                                                      _(2,3)
                                                        Loyalty |
                                                        _____|
                                          __Members__|
                                         |                 _____
                                Ignore  |                 Exit   |
                                _____|                        |__ (3,1)
                 Voice      __ Leadership ___|
       _____|                  |
      |                          |     Change
Members----------------------(1,1)  |_____(4,2)
      |                                    Exit
      |_____
            Loyalty        |_(2,3)
```

To analyze the graph we need to get back to the assumption concept in which members are dissatisfied and so they have the chance to choose among the strategy of Voice, Exit or Loyalty. As we can see from the graph if the members choose the Exit option or the Loyalty one the game ends. On the other hand if they choose Voice the
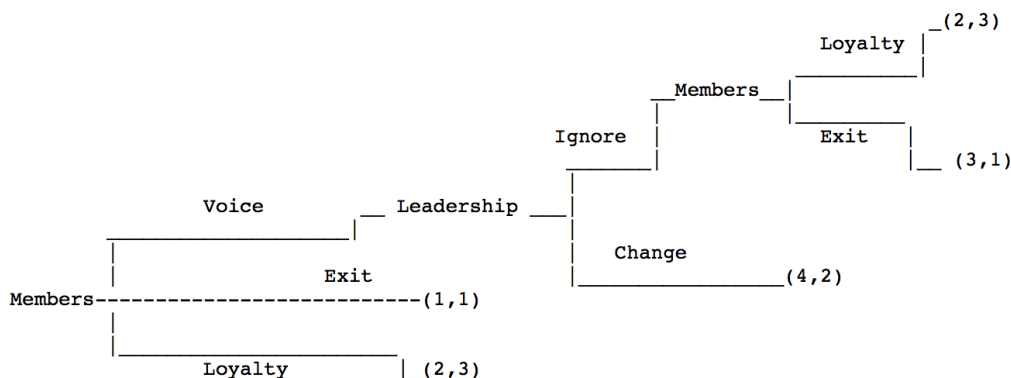
[8] Elizabeth A. Hoffmann, 'Exit and Voice: Organizational Loyalty and Dispute Resolution Strategies', Vol. 84, No. 4 (June 2006) p. 2313

leadership can respond with two different way, ignoring them or making a change. Again the game ends if the leadership decides to make a change, otherwise if the leadership ignores the members have the possibility to choose and to make their final decision between Exit and Loyalty.

The diagram can be read backward. In doing so at the last stage of the iterated game the members would prefer to choose Loyalty over Exit (3>1) going back to the previous stage at this point the leadership in order to increase the profit will choose the ignore option (3>2) rather than change.

Finally, going back to the previous stage the membership will still prefer the Voice option because it has the higher outcome (Exit 1 - Loyalty 2).

In the second graph I will explain an alternative iterated game in which the members prefer to leave and quit.

```
                                                                    _(2,3)
                                                        Loyalty |
                                                                |
                                            __Members__|
                                           |                    |
                              Ignore    |              Exit    |
                                       _____|                |__ (3,1)
                                           |
              Voice        __ Leadership ___|
     _____|        |
    |                          |      Change
    |           Exit           |_____(4,2)
Members------------------------(1,1)
    |
    |_____
         Loyalty          |_(2,3)
```

Also in this case the graph can be read backward and the assumption is always the same. Analyzing the game from the last step in comparison with the first graph the members will prefer to Exit the game (3>2). Going back to the previous stage the leadership has the chance to choose between ignore or change. At this point the leadership will of course choose the change option (2<1).

Finally, at the first step of the graph the members will choose the Voice option (4) rather than Exit (1) or Loyalty (2).

Chapter 2

INTERACTION BETWEEN VOICE AND EXIT

"*If deterioration is a process unfolding in stages over a period of time, the voice option is more likely to be taken at an earlier stage. Once you have exited, you have lost the opportunity to use voice, but not vice versa; in some situations, exit will therefore be a reaction of last resort after voice has failed.*"[9]

In his first approach to "Exit, Voice and Loyalty", Hirschman give an important attention to the cost of adopting both Exit strategy and Voice strategy stating that the cost of Exit in comparison with the cost of Voice is lower, because when a consumer decides to leave a company he or she just quit instead of using Voice that implies "the cost of actions", such as strikes, money, time, mental efforts and etc…

All this is true but until the moment in which we consider the Loyalty or entry costs. When we consider the Loyalty a consumer or an employee is more likely to exercise the Voice option which is the most expensive strategy; while if the consumer or the employee, at a first moment, has paid a high amount of entry costs in order to enter in such an organization, he or she has a higher propensity "to fight" for those products or policies which he or she is dissatisfied with.

In the 1980, Alfred Otto Hirschman published *"Exit, Voice, and Loyalty: Further Reflections and a Survey of Recent Contributions"*, in which the author analyzed three particular cases in which the usage of the Voice option rather than the Exit option, it is much more appropriate. This three particular cases of study are: first when the cost of Voice turns into a benefits, second when there is ignorance of consumer and producers, third when there is a vertical integration and marriage as institutionalized Voice.

In explaining the first situation, the one in which the cost of Voice turns into benefits, Hirshman proposed the particular case in which

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[9] Albert O. Hirschman, '*Exit, Voice, and Loyalty: Response to Decline in Firms, Organizations, and States*' (Cambridge, Mass.: Harvard University Press, 1970), p.37

those dimension of goods and services, which somehow are deteriorating their performance, have a strong public interest component. *"Wherever the public interest is involved, voice will not be felt as a cost but as a benefit by some people at some time, and, in this way, one of the primary handicaps of voice in relation to exit will be reduced and, on occasion, eliminated".* [10]

In describing the case of ignorance of consumers and producers, Alfred O. Hirschman used an example from a recent paper of that time of Richard R. Nelson, Michael Krashinsky, and Kennet Arrow. In this paper is reported the example of the day-care for small children which the measurement of the quality of the service is difficult for parents to understand.

The day-care is one of those services which are considered to be a whole class of services that for a number of reasons a strong demand arises at some point without any warnings. It is also a service where some people is willing to pay for a private and better service and others consider the day-care as a public service. In order to avoid any kind of future deterioration and so Voice and Exit problems, societies empowered specialized members to seek the most suitable situations. In doing that the consumers will feel protected, and at the same time the producer will be informed so he or she will be able to increase his or her performance.

The third case can be divided into two different categories. The first regards the concept of vertical integration and the second is the idea of marriage as institutionalized Voice.

The first case happens when a firm needs a specialized product from a valuable external supplier (horizontal integration), but this one can represent a risk because the chance to produce and to create a faulty product is high. If the product will turn into a deterioration case the firm will be keen to use the voice option to improve the performance. This is why Hirschman states, with his vertical integration, that is better to integrate the external firm instead of outsourcing its production.

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[10] Alfred O. Hirschman, 'Exit, Voice, and Loyalty: Further Reflections and a Survey of Recent Contributions'. The Milbank Memorial Found Quarterly. Health and Society, Vol. 58, No. 3 (Summer 1980), pp. 434-435.

The second one does not deal with an economic issue, but it regards with a social issue, the marriage. This one can be viewed like two different firms that merged together obtaining a high degree of mutual understanding. In this case when some problem arise the Exit option is not considered to be the convenient strategy because the cost of create a new "marriage" is just a wasting of time and money. This reason makes Hirschman say that the benefits that the use of the Voice option may resolve the problem.

Chapter 3

THE CASE STUDY OF STANDARD AND NONSTANDARD EMPLOYEE

In this chapter, we are going to analyze how a blended workforce worsen the relationship between managers and standard employees, and how it affects Exit, Voice and Loyalty among standard workers.

This is just one of a series of infinite examples of how the Hirschman's intuition is applicable and suitable to every situation, from a daily buying decision process (buy something and be Loyal to that specific brand, rather than buying something else) to problems of public education performance. This is may be the most relevant reason why Hirschman's book *"Exit, Voice, and Loyalty: Response to Decline in Firms, Organizations, and States"* has been so important and so criticized.

Coming back to our example, before starting to analyze the above mentioned case, we need to explain what we mean by "blended workforce". Today, many firms or organizations are using standard employees and nonstandard ones in order to achieve their goals and objectives, so, with a "blended workforce" we mean an organization that is composed both of standard and nonstandard employees.

Standard employees are characterized by *"work done on a fixed schedule — usually full time — at the employer's place of business, under the employer's control, and with the mutual expectation of continued employment"*.[11] All the other employees, including part-time employment, day labor and on-call work, temporary-agency and contract-company employment, independent contracting, and other self-employment are considered nonstandard workers.

Nowadays due to the economic crisis of 2008, the number and the usage of nonstandard worker has increased, consequently, standard employees need to be able to work side-by-side with them. By the

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[11] Kalleberg, A. L., Reskin, B., & Hudson, K. 2000. Bad jobs in America: Standard and nonstandard employment relations and job quality in the United States. American Sociological Review, 65: 258

way, assuming that from one side firms have an advantage to use temporary worker, with temporary contract (less risky); from the other side the workforce blending has decreased standard employees Loyalty, and increased their interest in exercising the Voice option through union, or in a worse scenario to the Exit option, which means leaving their organization.

Denis Rousseau, a professor at Carnegie Mellon University, argued in his book, *Psychological Contracts in Organizations* (1995), that the usage of nonstandard workers may be an important threat for standard ones, engendering problems of coordination, learning and shared value among blended workforce. This, obviously, cause a deterioration of the "work environmental system"; it is crucial for firms and organizations to understand and prevent how standard employees respond to this downturn.

Research suggests that managerial decisions about workforce blending create three important changes in the jobs of standard workers: increased responsibility, decreased developmental and internal mobility opportunities, and decreased actual or perceived job security.

Firstly, as just said, in a workforce blending, managers tend to increase the responsibility of standard employment without any increase in rewards. In fact, managers, usually, empower standard workers to train and supervise nonstandard employee, and hold them responsible for errors or faults made by their assisted worker.

Secondly, in a blended workforce the developmental and internal mobility opportunities decreased. In this situations, managers pay more attention to manage conflicts between standard and nonstandard employee. For this reason, standard workers receive less attentions from their manager, as a consequence the possibility to get a promotion in this environment is low.

Finally, the usage of nonstandard workers often reduces standard employees' actual or perceived security. Sometimes managers use temporary workers, which have a similar knowledge of standard employment, as a signal that standard workers may be replaced. By the way, standard employees with higher-wage are mostly protected

from the effects of workforce blending on job security and opportunity. High-wage workers have particular skills, knowledge, which are valuable and difficult to replace it.

In conclusion, as Alfred Hirschman suggested, the increased responsibilities and reduced job security and opportunities created by the workforce blending, and the consecutive deterioration of the environment, will increase Exit and Voice options among standard workers while decreasing their Loyalty.

Chapter 4

FORMAL MODELS

As it is written in previous chapter, where has been analyzed how a blended workforce worsened the relationship between managers and standard employees, and how it affects exit, voice and loyalty among standard workers, I am going to do the same thing in this chapter but with a mathematical point of view in order to have a more completed idea of what Hirschman's study is.

I will explain this mathematical point of view through two different formal models. The first one shows the relationship between the State and the Citizen, while the second one is the relationship between the Consumer and the Seller.

4.1 State & Citizen

This is the game.

We are in a situation where there are two individuals, who belong to an organization. The organization is composed by the "State" (L), which is a player that has the power to set a policy which can be seen as a tax by the second players who are the citizen (C).

Without any doubts, the tax creates a conflict of interest as the citizen wants to pay less and the state wants to earn more.

In this model the tax has a random value x between 0 and 1, the citizen receives from the policy a payoff x and the state a payoff $(1 - x)$.

The main assumption is that the freedom of the state in setting the police is limited by the chance of the citizen to use the Exit option, intact the policy can be implemented only if the players C remain in the game. By the way, if C leaves the game it will receive a payoff q_C and the leadership, state, a payoff q_L, so $(q_C + q_L) > 1$, then there will be a disadvantage if someone decides to use the Exit option. For this

reason there will be always a policy *x* in which both leadership and citizens are better off, on the other hand the Voice option will play an important role for citizen in order to change the *x* value.
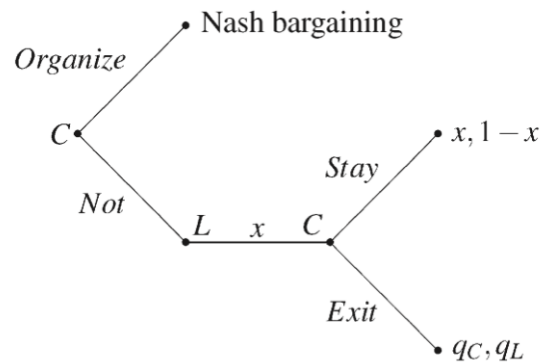
The figure 1 shows the sequence of play.

Figure 1. Sequence of play

At the start of the game the citizen has the chance to choose between being organized or not, if the citizen chooses to be organized he has to pay a cost *w*. The model thus follows Hardin (1982: 73) in assuming that "*in collective action, whether an acceptable substitute is available will be important in determining whether intense demanders organize a collective effort or opt for a private solution of their problem*". [12]

At this stage if the citizen decides to be organized they will fall into a Nash bargaining solution, in which the payoff is split 50 - 50, on the contrary if the citizen decides not to be organized the leadership will make a *take-it-or-leave-it offer* of *x*, in order to repay to this offer the citizen can decide whether to stay or leave.

"*My solution concept is subgame-perfect Nash equilibrium. The following two subsections walk through the backward induction by which I find the equilibrium*".[13]

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[12]. In focusing on collective action, I neglect the possibility that members of an organization may also act through 'individual voice' (Dowding et al. 2000), such as complaining to a store manager about the quality of a product. Hirschman's own formalization (Hirschman 1970: Appendixes A–D) seems to correspond more to this alternative case, constrained as it was by its reliance on the tools of consumer-demand theory.

[13] Scott Gehlbach, "*A Formal Model of Exit and Voice*".

4.1.1 Exit

Now, if the citizen is organized bargain power over the surplus for *C* and *L* will be *1 - (q_C + q_L)*.

Assuming that the Nash solution is accepted from both *L* and *C* the value of the policy will be x_N= *(1+ q_C - q_L)/2*. In this case the power of the citizen is very high (given the Nash equilibrium 50:50). The state should offer more to the citizen to keep them in the game (organized).

In the case in which *C* is not organized (Exit), the leader is compelled to a *take-it-or-leave-it* effort, which will be equal to the marginal cost of the citizen, x_T = q_C. Also in this case, if the value of Exit increase, the leadership will be more accommodating.

From the comparison of the payoff of *C* when is organized and not organized is possible to obtain two important key factors.

The first is that x_N > x_T, and for this reason *C* is better off when is organized because it is able to demand a share of surplus.

The second important aspect is that *C* benefits more from a marginal increase of the Exit payoff q_C in the *take-it-or-leave-it* environment. This is possible because in the first case (organized) an increase in q_C must be split between *L* and *C* *(x_N= (1+ q_C - q_L)/2)*; while when it is not organized it will be able to enjoy the entire value of q_C *(x_T = q_C)*.

4.1.2 Voice

The citizen will choose to be organized only if its payoff from the collective barging process x_N, less the cost of being organized *w,* the result is greater than the payoff received in the *take-it-or-leave-it* case, so:

$$\frac{1+(q_C - q_L)}{2} - w > q_C$$

"Most trivially, organization takes place when collective-action problems are easy to overcome (w is low). More interesting, and consistent with Hirschman's original argument, Exit reduces Voice in the sense that citizens are less likely to organize when their exit option q_C is large" .[14]

By the way, if an increase in the value of Exit happens the leadership makes Voice a less likely option. In fact, when C is organized a rise in q_L increases the L bargaining power over C in the negotiation. If q_L increases reaching a convenient level, L may also decide to Exit the Nash equilibrium at a little cost. For what concern the Exit case an increase in q_L has not relevance for the C's outcome, in fact C will always receive a value of $x_T = q_C$ in the Exit option.

Intuitively as above, when q_L is too high, for the state will be much more convenient to leave the game and so the chance to be organized is reduced.

4.1.3 Loyalty

Hirshman, as I just said previously, in one chapter of his book *"Exit, Voice, and Loyalty: Response to Decline in Firms, Organizations, and States"* said that Loyalty as the power to keep individual in an organization increasing the incentive of using the Voice option, while reducing the Exit option. This is shown in the following graph which also demonstrates how Loyalty does not necessary increase the total welfare, *"whether loyalty increases or decreases members' welfare depends on its nature: an increase in loyalty leaves members unambiguously worse off when defined as an exit tax, while members may benefit from greater loyalty if it instead takes the form of a voice subsidy."*[15]

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[14] Scott Gehlbach, *"A Formal Model of Exit and Voice"*.

[15] Scott Gehlbach, *"A Formal Model of Exit and Voice"*

Figure 1 shows that, *"when the reduction in q_C is sufficiently great, policy shifts from $x_T = q_C$ to $x_N = (1+ q_C - q_L)/2$, thus redistributing surplus from the leadership to citizens. But this shift does not leave citizens any better off, since they must bear the cost of organizing w, which is exactly equal to $(x_N = x_L)$ when citizens overcome their collective-action problems. At the same time, an increase in loyalty – a decrease in q_C – allows the leadership to take advantage of citizens' reticence to exit by offering a less favorable policy, whether they have organized or not".*[16]
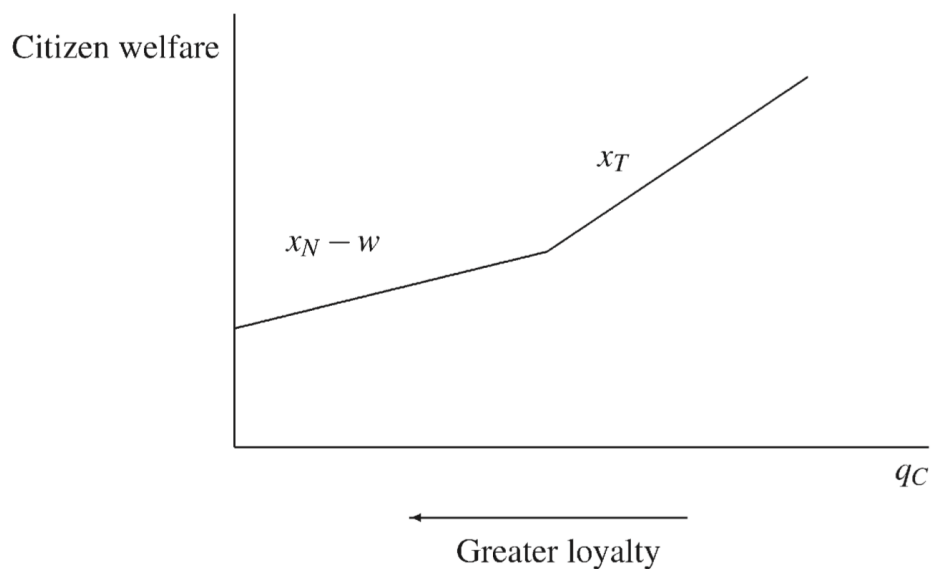

Figure 2. Impact of loyalty on citizen welfare – loyalty as exit tax

Instead, in the case of Figure 3, loyalty is seen as voice subsidy that reduce the cost of organization w in this case loyalty increase the overall welfare, but only when w is low enough that citizen holds up the cost of collective actions.

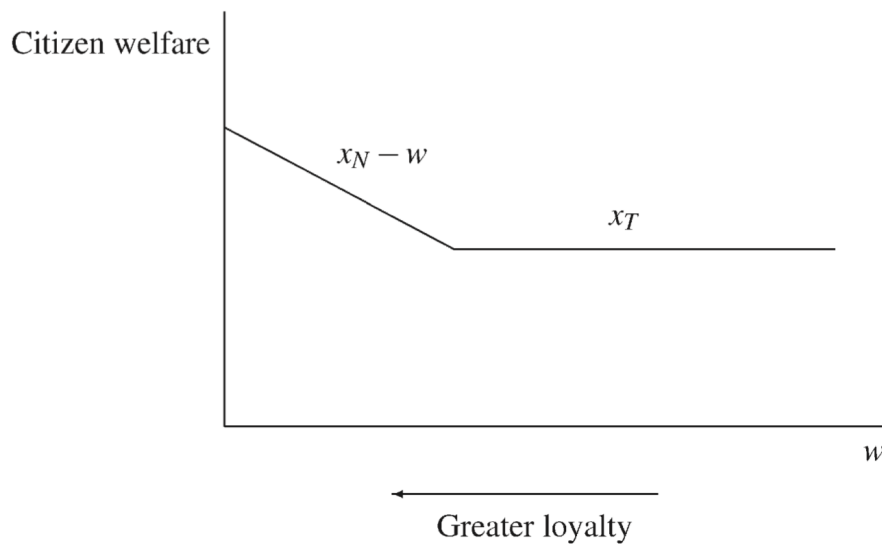[16] Scott Gehlbach, *"A Formal Model of Exit and Voice"*

Figure 3. Impact of loyalty on citizen welfare – loyalty as voice subsidy

"The model thus helps to reconcile Hirschman's account with the arguments of scholars who have criticized his use of the concept of loyalty (see, e.g. Barry 1974; Birch 1975; Boroff and Lewin 1997): loyalty may impel an organization's members to agitate on behalf of change, but it can also simply increase their capacity to 'suffer in silence' (Barry 1974: 97)".[17]

4.2 Consumer case

In this second example we are going to describe another general case in which we will demonstrate how is possible to calculate the exit option and the voice option.

4.2.1. exit
The exit calculation can be divided into a 3 stage process:
1. There is the need to verify if there is any available and sustainable alternatives to our product. If there are not, the stay

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[17] In many contexts the absence of organized voice will not be associated with literal silence, but rather with vocal expressions of allegiance to the organization; see Havel (1992 [1978]) and Kuran (1997).

option is the only solution until there will be a marginal utility. If not, Exit will represent a valid solution.

2. On the contrary, if alternatives exist, we need to consider the transfer cost which can be divided into direct and indirect cost. After having calculated, the current cost and benefits must be discounted into the future. So, if we consider the exit cost (*F*) it must be lower than the benefit (*B*) minus cost (*C*) discounted over time (*D(t)*). Here, following the formula:

$$F < \sum_{t=0}^{\infty} \left(\sum_{G=-\infty}^{+\infty} P_G . G \right)_t . D(t).$$

At this stage we need to consider another variable. The probability referred to the future expected quality of exit. If, now we call this probability *P(B-C)*, the new cost benefit inequality will be:

$$F < \sum_{t=0}^{\infty} (B-C)_t . D(t).$$

Where *G* is the net differential (*B-C*).
So, the basic gain from Exit (*Ne*) is:

$$N_e = \sum_{t=0}^{\infty} \left(\sum_{-\infty}^{+\infty} P_G . G \right)_t . D(t) - F.$$

In other words the gain from exit will be difference between the fix cost and the discounted expectation.

3. The last stage of the exit decision is strictly related to the success of the voice option. "*Consider first the possibility that voice is less effective after exit, and estimate the maximum possible net benefit from voice after stay, and the maximum possible net benefit after exit. Call these* ($N_{v(s)max}$) *and* ($N_{v(e)max}$) *respectively.*

These maxima will never be less then zero since, if a loss were predicted on voice. Voice would not be used".[18]

So the basic gain (*Ne*) has to be:

$$N_E > N_{v(s)\,max} - N_{v(e)\,max}.$$

At this point, the last thing that we have to do it is to substitute *Ne* in the previous formula. The final Exit calculation will be:

$$\sum_{t=0}^{\infty} \left(\sum_{G=-\infty}^{\infty} P_G \cdot G \right)_t \cdot D(t) - F > N_{v(s)\,max} - N_{r(e)\,max}.$$

4.2.2 Voice

The calculation of the Voice strategy is very similar to the one of the Exit option. So, if we consider that (I_j) is the benefit per unit after having used Voice, and its probability (P_{Ij}), the expected benefit will be:

$$\sum_{I_j=-\infty}^{\infty} P_{I_j} \cdot I_j.$$

Also in the Voice's case, the expected gain must be discounted over time *d(t)* so that:

$$\sum_{t=0}^{\infty} \left(\sum_{I_j=-\infty}^{\infty} P_{I_j} \cdot I_j \right)_t \cdot d(t).$$

The simple-cost benefit sum ($C_{(vj)}$) ensures that the cost of a marginal unit of Voice is less than its return:

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[18] Michael Laver, 'Exit, Voice, and Loyalty' Revisited: The Strategic Product and Consumption of Public and Private Goods. British Journal of Political Science, Vol. 6, No. 4 (Oct., 1976) p. 475

$$C_{(v_j)} < \sum_{t=0}^{\infty} \left(\sum_{I_j=-\infty}^{\infty} P_{I_j}.I_j \right)_t .d(t).$$

So, the net gain from unit of Voice (n_{vj}) is:

$$n_{v_j} = \sum_{t=0}^{\infty} (\Sigma P_{I_j}.I_j)_t .d(t) - C_{v_j}.$$

The aggregate net gain N_{vk} from using a total of *k* units of Voice is the sum of every marginal gains made from the first to the *k*th unit.

$$N_{vk} = \sum_{j=0}^{k} n_{vj}.$$

Finally, "*the consumer do not have unlimited resources. Assuming that the maximum level of expenditure a consumer is prepared to incur on voice in this context is R. He will take its maximum gain, if it has not already occurred, at this point. He will not spend more, and he stops at the zth unit of Voice, such that*":[19]

$$\sum_{j=0}^{z} C_{v_j} \leqslant R \quad \text{and} \quad \sum_{j=0}^{z+1} C_{r_j} > R.$$

4.2.3 Loyalty

Also in this case Loyalty has the power of keeping a person into a specific environment, it is for this reason that Loyalty, it is indirectly expressed in both the probability of Exit and Voice.

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[19] Michael Laver, 'Exit, Voice, and Loyalty' Revisited: The Strategic Product and Consumption of Public and Private Goods. British Journal of Political Science, Vol. 6, No. 4 (Oct., 1976) p. 477

CONCLUSION

I chose the topic of Hirschman's Exit, Voice and Loyalty strategies with the aim to explain to the reader, how such an easy theory can be applied in every single context, starting from business problems to every day ones.

In this paper I talked about several examples in order to give to the reader an idea or possible solutions about daily issues. As I just said, the Hirshman's theory is applicable in every kind of decisions of every day life, the documents that I chose to elaborate this paper are the demonstrations that several writers wrote about it, providing a wide range of documents with different topics and different types of genre: literal and analytic.

Concerning the literal one, as I have discussed in the second chapter, I reported some particular cases of study in which Exit and Voice are linked together.

From this chapter we can understand that in many situations the use of the Voice option is not a "waste of time", but it is the best strategy to apply and this is why Hirschman ten years after the first publication of his book "*Exit, Voice, and Loyalty: Response to Decline in Firms, Organizations, and States*", came back to talk about the importance of the Voice strategy and its benefits which in most cases can be more successful and can generate higher payoff with respect to the Exit strategy.

Other writers took a different approach towards the Hirschman's theory, looking at it under an analytic and mathematical point of view. As it is written in the fourth chapter, some economists tried to estimate the different payoff that an Exit or Voice option may generate. Also in this case I dealt with several different papers and documents to explain that even this kind of strategy can be used for every kind of problems.

The value of the Hirshman's model is that it points out an important way and a significant economic interpretation of human behavior in mass society. Albert O. Hirshman explored a vast range of topics,

inspired by the complexity of human behavior and social reality rather than by traditional economic models based on the rigid assumption of perfectly rational behavior. He applied a subtle perspective to reconcile traditional economic theorizing with the complexities of strategic behavior, resulting in original work that was a constant stimulus to critical thought in the social sciences.

One of the reasons why Hirschman wrote "*Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*" is to investigate the means by which people can address problems that inevitably arise in the associations they belong to.

The uniqueness of his theory is that his model can be implemented in respect of all kind of organizations and societies, not only from the state.

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