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A Social Dynamics on Launching Safa Tempos in Kathmandu Valley: A Campaign Against the Air Pollution

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Abstract

Safa Tempos (Electrical Vehicles-EVs) have existed as a new phenomenon influencing the Kathmandu Valley in reducing the air pollution considerably. Besides, the movement can be taken as a concrete initiative advanced as a campaign against air pollution in a way that was never done before. They are environmental friendly and the only operating vehicles having zero emission. The success story of Safa Tempo as we see today is 'by default and not by design'. The objective of the study is to examine the social dynamics on launching Safa Tempo in the Kathmandu Valley on the basis of the Cultural Theory. In the theory, the social actors who are involved in supporting, opposing, questioning and controlling on launching Safa Tempo in the Kathmandu Valley can be categorized into four groups: Individualist, Egalitarian, Hierarchic and Fatalist. It is clearly seen that the stand of the social actors are dynamics as they change their position according to the pressure from without.

Keywords: Social dynamics, Safa tempos

Introduction

The initiation of Safa Tempos (Electrical Vehicles – Evs) in Nepal happened to take place in a very casual form. When India imposed embargo in Nepal during 1989, the immediate consequence was the fuel scarcity in Nepal. This prompted a certain group of intellectuals, engineers and entrepreneurs to explore alternative sources for transportation so that Nepal can manage during such period. In addition, during that time the concerned people noticed the improved state of air quality in the valley. This part boosted their inspiration even more (Baral, 1999).

The result was the conversion of the Volkswagon Beetle into a battery operating EV in 1992 by the same group under the name of EVDG (Electric Vehicle Development Group) (Joshi, 1999). This was conducted in a private set up with their investment. However, the cost came to be expensive; it cost Nepalese Rs six/kilometer and it was more expensive than diesel itself. Hence, the group was not able to produce economically practical electrical vehicle except the fact that it had succeeded in using the alternative sources to utilize the hydropower, which is

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the only natural resource Nepal possesses abundantly provided that Nepal develops it further.

In 1993, Global Resource Institute (GRI) with the aid from US Asia Environment Partnership (ASAEP) and National Association of State Development Agencies (NASDA) was committed to research and develop EVs as a profitable and environment-friendly industry in the transportation sector. The idea was to convert Bikram and Bajaj (Diesel and Petrol) Tempos into Safa Tempos (Electric). Seven of the Safa Tempos were manufactured with the fund, were demonstrated and put into auction.

The group of engineers who had pioneered the idea in 1992, along with other professionals and entrepreneurs constituted Nepal Electric Vehicle Industry (NEVI) in 1996, bought all the seven Safa Tempos and developed expertise for additional production of Safa Tempos. At the present there are other manufacturing companies, which are Electric Vehicle Company (EVCO), Green Electric Vehicle Pvt. Limited (GREV) and so on (Joshi, 1999).

Development of Safa Tempo

NEVI is the first company which resumed the Safa tempo campaign. It went through painful procedure in trying to adopt the highly efficient Western technology, which had been used in the first seven Safa tempos by GRI. It adopted the Western Technology in Kathmandu's infrastructure as an almost impossible venture. In the process, financially it was too expensive to import certain electrical components from Europe and they were substituted by the Indian ones. Chassis, the main body was imported from India and so are the other few components while the batteries were imported from California, USA. Finally, they were assembled in Nepal (Repso, 1999).

Regarding the conversion of diesel tempos into Safa Tempo in 1996, His Majesty's Government of Nepal and Royal Danish Government signed an agreement to convert 100 diesel tempos into EVs within four years. For this purpose a budget of 25 million Nepalese rupees was allocated, part of which was to be invested in charging stations. This project has not been succeeded due to various reasons. However, it is beyond this study to explore those reasons.

According to Bikash Pandey of REPSO/Winrock International and Kiran Raj Joshi of Nepal Electric Vehicle Industry (P) Ltd., the success story of Safa Tempo as we see today is by '*default and not by design*'. Both of them were emphasizing the fact that when the government drove away gasoline (Bikram and Bajaj) Tempos, they had no intention of promoting Safa Tempo as the substitute but were inclined to encourage Microbus. And when the policy was implemented, there was the scarcity of transportation means and the general havoc occurred. That was the time when Safa Tempo got the opportunity to flourish, as the government's plan to

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launch Microbus did not materialize. Although, attempts to import Microbus was on the process during the period of field study, there are many microbuses, at present, on and around Kathmandu city.

Objective

The main objective of the research is to examine the social dynamics on launching Safa Tempos (Electrical Vehicles) in Kathmandu valley on the basis of the Cultural Theory.

Rationale of the study

According to the cultural theory, the actors who are involved in supporting, opposing, questioning and controlling on launching EVs in Kathmandu can be categorized into four groups: Individualist, Egalitarian, Hierarchic and Fatalist. The fatalist is indifferent to the occurrence of the new trend while the hierarchic forms the rules and regulations concerning the phenomenon and often is the representative of the government body. Similarly, the egalitarian is the one who raises the voice if something inappropriate or unfavourable is foreseen in the process. The egalitarian is conscious of the phenomenon and makes sure that it does not affect the existing society in any ways. Finally, the individualist is the one who commences the action on his individual interest but may have alliance to the egalitarian as well as the hierarchic. The actors may fall into one or more categories depending on where they stand with their own personal interests. This study analyses all the possible actors in reference to the above-mentioned categorization on the basis of cultural theory (Figure 1).

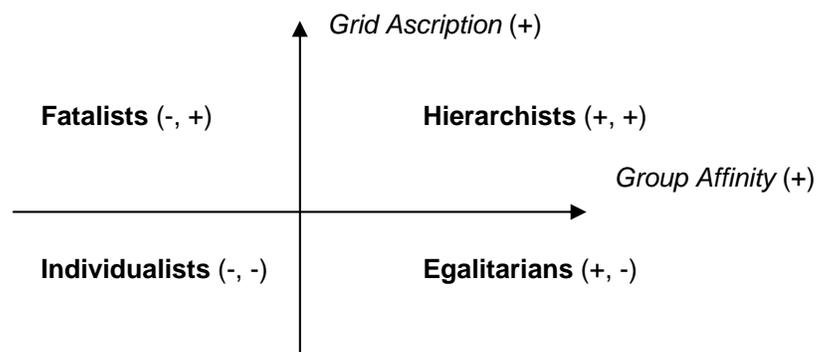


Figure 1. A Study Model of Cultural Theory

Source: Thompson, 1990; and Douglas, 1992.

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The specific reason for taking the operation of Electric Vehicles in Kathmandu valley as the case study is the fact that EVs have existed as a new phenomenon influencing the valley in reducing the air pollution considerably. Besides, the movement can be taken as a concrete initiative advanced as a campaign against air pollution in a way that was never done before.

Methodology

Primary Information: Individuals have been interviewed with open-ended questions. Different checklists for the questions were prepared as per the different actors. Notes were taken and an audio recorder was used as a recording device while interviewing.

Secondary Information: The related documents were reviewed and compiled from various individuals and institutions/organizations during the study period.

Results and Discussions

The Individualist: The fact that the idea of EV generation was on the individual interest. It explains that it was formed with the individual concern. However, this observed interest relates with the egalitarian ideology as the group had then also shown their commitment and concern for the environmental degradation that had been caused by diesel and petrol Tempos. Hence, they were concerned for the negative consequences that had already been traced out in the bowl-shaped Kathmandu valley which is susceptible to air pollution due to temperature inversion (Joshi, 1999; 1). The group was motivated by feelings geared to saving the valley and so was inspired to run the EV industry. This would be more like a double-barrelled target.

However, the first group NEVI after purchasing the set of seven Safa Tempos were not permitted to register their Tempos as the Department of Transport Management banned the registration of the three-wheeled tempos in 1993. In the drafted policy, the Department of Transport Management had mentioned the prohibition of 'three wheeled tempo' irrespective of its nature. That is why, NEVI was obstructed from registering their Tempos as well on the same ground. Now, NEVI was not allowed to operate their Tempo by the US Embassy either without the registration because they could have been hassled in case something drastic could happen during the operation of the Tempo itself. From this incident, it could be understood that the individualist group was obstructed by the hierarchical structure, which was conformed and followed unless some other momentary legislation could be formed.

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The Egalitarian: The group, which was at the outset seen as standing on the individual platform, however can be seen as standing on the egalitarian stand later. The Safa Tempo entrepreneurs have claimed that the government should provide maximum subsidies to the Safa Tempo manufacturers. They have argued on the logic that Safa Tempo is environment-friendly and the only operating vehicles having *zero emission* so it should be encouraged at all cost. And also it is locally assembled. The government has prioritised the owners of the diesel Tempos to have the license to import Microbus.

The custom duty is 1% for Safa Tempos. However, microbus would be exempted from VAT while, for Safa Tempo, VAT is included in the entire electronic component except chassis and batteries. The owners argue that provided the components as well are excluded from VAT Rs15000 would reduce the total cost and consequently the profit margin would be increased. This would help to flourish Safa Tempo industry.

The owners have also argued that they should have the facilities of soft loans. In the matters of electric tariff they claim that they should get further discount during off-peak hours as the electricity during that hours would have been wasted anyway. The manufacturers are worried that the presently flourishing Safa Tempo industry might deteriorate. Hence, the entrepreneurs have taken the stand of the egalitarians.

In favour of the operation of the Safa Tempos, the egalitarians carried out campaigns against the diesel-operated three wheelers, which was also supported by the environmental groups. The campaigners could be seen as a newly formed egalitarian group who are conscious about the benefit that EVs have for the valley's infrastructure. Some of the individuals also advocated the need for such conscious groups to minimise vehicular emission in the valley. In addition, such campaign can also promote indirectly the use assembled EVs at local level. Hence, the alliance between individualist and egalitarian group can be precisely observed in the social dynamics of EVs.

The Hierarchic: The government has taken the assumption that they have provided all the possible subsidies to the Safa tempo entrepreneurs. Hon'ble Bhakta B. Balayar, the Ex-Minister of State for Population and Environment who played a vital role on driving diesel tempos out of the valley however agrees that there are certain measures which should be amended, such as VAT inclusion on the majority of the electric components. In general, government representatives claim that the Safa Tempo owners have been provided soft loan with the interest of 5 per cent and such loan was provided to 48 tempos. However, in real terms the banks such as Rastriya Banijya Bank, Nepal Bank Limited and other banks provide loan only on commercial rates, i.e. 14-18%. The criteria for obtaining loan are rigid. This shows a great contradiction between the two sides, i.e. private sector

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and the government sector. This could be because of the communication gap. The individualists-cum-egalitarians claim that the government has been least sensitive about the subsidies Safa Tempo industry is liable to get. However, on the contrary the government claims the opposite. This is one of the reasons, which has worsened the situation instead of solving the problem.

The government has been subsidizing importing Microbuses since the time when diesel Tempos were driven out of the valley. Microbus facilities are extended exclusively only for the Bikram Tempo owners. Now, on the process when EVs flourished and were successful in substituting Bikram Tempo to a certain extent, Bikram Tempo owners campaigned against the operation of Safa Tempo. When the government supported the Bikram Tempo owners by providing them possible subsidies, there seemed to form an alliance between the diesel Tempo owners and the government in avoiding the use of diesel-operated three wheelers in Kathmandu. Hence, also in this respect the individualists who were the owners of diesel Tempo also acted as an egalitarian group as when diesel Tempos were driven out, the questions on the livelihood of the drivers as well as the entrepreneurs were raised. From this, it can be clearly seen that the stand of the social actors is dynamic as they change their positions according to the pressure from without.

Balayar, who was in 'Hierarchy' also seems to shift his position from the previous one to the egalitarian group. He asserted that even though he is not in the MOPE anymore, he is determined to help the operation of existing Safa Tempos and his attempts would be persistent through out even as an MP.

The Fatalist: Among the public, though the majority of the people are enthusiastic and positive about Safa Tempo operation, there are few fatalists for whom the change in the transportation from Bikram Tempo to Safa Tempo does not make too much of a difference. Three categories of fatalist people are found in terms of using Safa Tempo as the means of transportation during the study period.

Category A: Some people are indifferent to what they are using as the means of the transportation. What means of transportation has come into the existence does not necessarily concerns them and are unaware or irresponsive of the social dynamics involved.

Category B: Some of the people are worried about paying higher fare for Safa Tempo as compared to Bikram tempo and do not want to bear social cost irrespective of the positive result Safa tempo has been providing. They are only concerned about the lower fare Bikram Tempo had and all the other details are insignificant to them.

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Category C: Another set of fatalists is found to be the ones who have suffered since the time diesel tempos were ceased. Safa Tempos have not been able to extend their operation in all the places where diesel tempos used to operate. For instance: In the route of Lagankhel to Godawari. Now, the people of this route feel disadvantaged and they merely blame battery-operated tempos for that matter regardless of the environmental benefits. The EVs owners should ponder on this matter so as to gain the support from the fatalists as well.

On the part of the fatalists, however, when they become conscious of the social dynamics involved, they may have an inclination towards any of the other three categories, i.e. Hierarchy, Egalitarian and Individualist.

Conclusion and Recommendations

After conducting this brief research and analyzing the existing situation, launching of EVs can be seen as highly commendable as a campaign against air pollution. The emphasis should be given on the further development and restoration of EVs. For example: the conversion of existing diesel/ petrol vehicles into battery operating vehicles should be promoted, possible subsidies should be provided by the government and the establishment of the recycling plant for the disposed batteries. It should be prioritized so as to avoid dangers of battery leakage on the ground that causes the contamination of acid and other hazardous chemicals to the ground water. The ground water has been used for drinking purposes in many urban parts of Nepal and Kathmandu valley as well.

Regarding the battery discarding and the subsequent risk it might provoke, one can simply come to the conclusion that it is intentionally delivered as an issue because all the diesel and petrol vehicles do have the batteries fitted in them. According to Bikash Pandey, Safa Tempos produce 105 tonnes of scrap batteries whereas other vehicles run by petrol/diesel produce 1240 tones of scrap batteries annually. Therefore the problem of the environmental havoc through batteries can be contributed by any of the vehicles and not just by the EVs. And it has a resale value of five to six hundred Nepalese rupees so that about 95 per cent of those batteries from Safa Tempos are exported to India. Hence, as prevention is better than cure, battery disposing should be taken into consideration but should not be made an issue to discourage EV operations.

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