

Demand of modified two-wheelers for individuals with orthopedic disabilities in India

Introduction

Orthopedic impairment refers to a physical disability that negatively impacts an Individual performance. The impairment can be congenital, such as spina bifida, or acquired after birth, for example, caused by a disease or an injury. The individuals suffering from physical disability are becoming independent by the use of 4 wheelers as well as 2 wheelers vehicles. The report entirely focuses on the growing demand of modified vehicles along with the Manufacturer.

Overview of the Market Research Objective

Market research took place to know the demand of two wheelers for orthopedic people in India. The main questions that arrive before doing a research are many but some which are considered in the report are mentioned.

1. How many orthopedic individuals are interested in buying the vehicle?
2. What is the exact market size and demand for the modified two wheelers?
3. The dealers for comparison are Hero motocorp and Honda.

Graphical representations are also mentioned between the report for better understanding.

Comparative Analysis between Hero Moto Corp and Honda

Hero MotoCorp

Hero MotoCorp is one of the leading motorcycle manufacturers in India. While they do not offer specific models designed exclusively for individuals with orthopedic disabilities, they provide certain features that can be beneficial for riders with such disabilities. These features include:

- a) **Low Seat Height**: Hero MotoCorp offers motorcycles with relatively low seat heights, which can make it easier for individuals with limited mobility or leg strength to reach the ground comfortably.
- b) **Easy Kick-Start Mechanism**: Some Hero MotoCorp motorcycles come equipped with a user-friendly kick-start mechanism, which can be advantageous for riders with limited leg strength or mobility.
- c) **Lightweight and Maneuverable**: Hero MotoCorp produces motorcycles that are lightweight and easy to maneuver, making them suitable for individuals who may require more control and stability.

While Hero MotoCorp doesn't have specific modifications for orthopedic disabilities, it is possible to make certain adaptations based on the individual's needs through aftermarket customization.

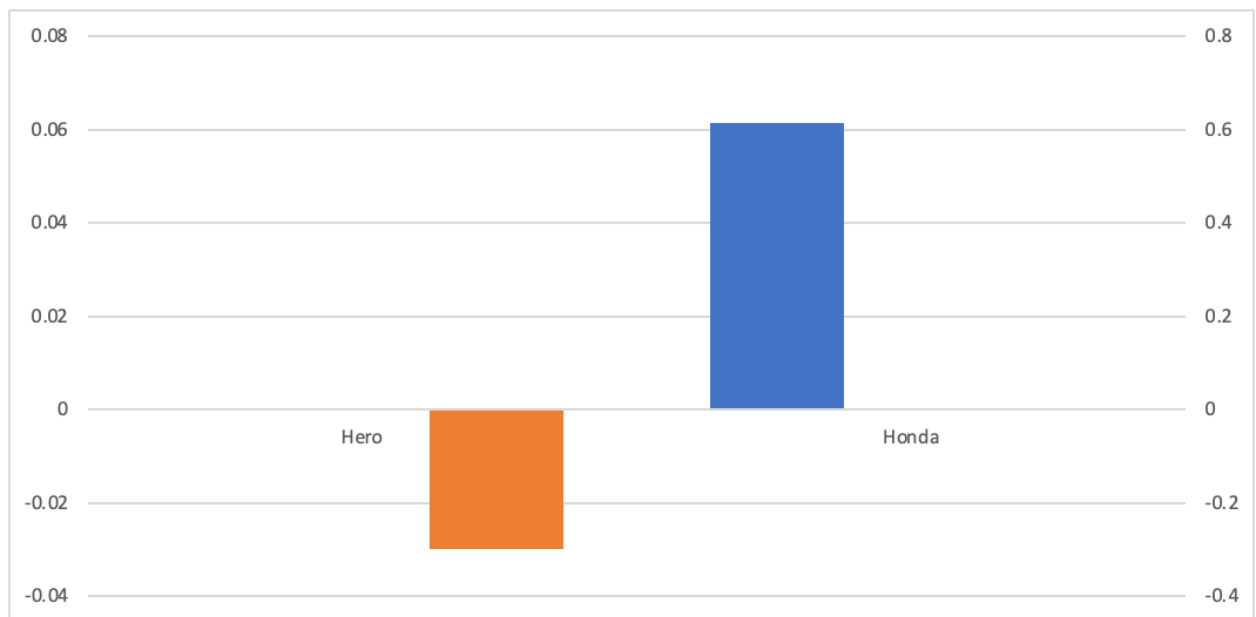
Honda

Honda is another prominent motorcycle manufacturer known for producing a wide range of motorcycles globally. Although Honda doesn't offer motorcycles explicitly modified for individuals with orthopedic disabilities, they do provide certain features that can be beneficial:

- a) **Automatic Transmission**: Honda offers several models with automatic transmissions, such as the Honda Activa scooter series. Automatic transmissions can be advantageous for individuals with limited mobility or difficulty operating manual clutch and gear systems.
- b) **Easy Electric Start**: Most Honda motorcycles come equipped with an electric start feature, eliminating the need for a kick-start mechanism. This can be convenient for riders with limited leg strength or mobility.
- c) **Comfortable Seating**: Honda motorcycles often feature well-padded seats and ergonomic designs, providing a comfortable riding experience for individuals with orthopedic disabilities.
- d) **Scooter Range**: Honda has a wide range of scooters available, which tend to have lower seat heights and a more upright riding position, making them accessible and suitable for individuals with orthopedic conditions.

Similar to Hero MotoCorp, Honda motorcycles can be customized and adapted according to specific requirements through aftermarket modifications.

APRIL 2023 TWO-WHEELER SALES					
	April '23	April '22	Change	March '23	Change
Hero	3,86,184	3,98,490	-3%	5,02,730	-23.18%
Honda	3,38,289	3,18,732	6.13%	1,97,512	71.2%



As per the analysis it is evident that the 2 wheelers sales of hero has declined by 23.18% so if hero start with a new marketing technique or campaign of introducing modified two wheelers for individuals with disabilities then their market demand can grow. As per the data 2.2% of Indian population has a disability so in the society of 2.2 Billion population if Honda comes out with this innovative concept then they can rapidly grow its market share.

Market Analysis

Total Population of Individuals with Orthopaedic Disabilities

Statement 3.1: Total Population and the population of disabled persons in India - Census, 2011					
Population, India 2011			Disabled persons, India 2011		
Persons	Males	Females	Persons	Males	Females
121.08 crore	62.32 crore	58.76 crore	2.68 crore	1.50 crore	1.18 crore

Locomotor: (Lower Census, Higher NSS)

The NSS has a broader definition than the Census. The NSS includes persons with paralysis, amputation, deformity, dysfunction of joints and dwarfism as having locomotor disability. Persons with dwarfism or deformity are considered disabled even if they are not limited in the movement of their body or limbs. In the Census, locomotor disability covers the absence of all toes, all fingers, deformity, the inability to move without aid, the inability to lift and carry any small article. The differences in the definition of locomotor disability are consistent with the much higher rates of locomotor disability prevalence in the NSS (10.6 million, 57.5 percent of PWDs) than in the Census (6.1 million, 27.9 percent of PWDs).

Table 1: Disabled Population (Census of India- 2011)

State /UT	Number of Disabled	Total Population	% disabled to total population
INDIA	26814994	1210854977	2.21
JAMMU & KASHMIR	361153	12541302	2.88
HIMACHAL PRADESH	155316	6864602	2.26
PUNJAB	654063	27743338	2.36
CHANDIGARH	14796	1055450	1.4
UTTARAKHAND	185272	10086292	1.84
HARYANA	546374	25351462	2.16
NCT OF DELHI	234882	16787941	1.4
RAJASTHAN	1563694	68548437	2.28
UTTAR PRADESH	4157514	199812341	2.08
BIHAR	2331009	104099452	2.24
SIKKIM	18187	610577	2.98
ARUNACHAL PRADESH	26734	1383727	1.93
NAGALAND	29631	1978502	1.5
MANIPUR	58547	2855794	2.05
MIZORAM	15160	1097206	1.38
TRIPURA	64346	3673917	1.75
MEGHALAYA	44317	2966889	1.49
ASSAM	480065	31205576	1.54
WEST BENGAL	2017406	91276115	2.21
JHARKHAND	769980	32988134	2.33
ODISHA	1244402	41974218	2.96
CHHATTISGARH	624937	25545198	2.45
MADHYA PRADESH	1551931	72626809	2.14
GUJARAT	1092302	60439692	1.81
DAMAN & DIU	2196	243247	0.9
DADRA & NAGAR HAVELI	3294	343709	0.96
MAHARASHTRA	2963392	112374333	2.64
ANDHRA PRADESH	2266607	84580777	2.68
KARNATAKA	1324205	61095297	2.17
GOA	33012	1458545	2.26
LAKSHADWEEP	1615	64473	2.5
KERALA	761843	33406061	2.28
TAMIL NADU	1179963	72147030	1.64
PUDUCHERRY	30189	1247953	2.42
ANDAMAN & NICOBAR ISLANDS	6660	380581	1.75

Type of vehicles which can be easily Modified for orthopedic disabled people

Hero Splendor Plus

The Hero Splendor Plus is one of the popular commuter motorcycles offered by Hero MotoCorp. It features a comfortable seating position and a low seat height, which can be advantageous for individuals with orthopedic disabilities.

However, Hero MotoCorp doesn't offer specific modifications or adaptations for individuals with disabilities. Additional customizations would need to be done through third-party vendors or workshops.

Honda:

Honda Activa 125

The Honda Activa 125 is a popular automatic scooter offered by Honda.

It provides a convenient riding experience, especially for those who may have difficulty operating manual gear shifts.

The scooter has a step-through design, making it easier to mount and dismount, which can be beneficial for individuals with orthopedic disabilities.

Honda does not offer specific modifications or adaptations for individuals with disabilities. Additional customization may be required from external sources.

Honda Dio:

The **Honda Dio** is another popular automatic scooter from Honda's lineup.

It shares similar features with the Activa 125 in terms of convenience and accessibility.

Like other standard models, Honda Dio doesn't come with pre-installed modifications for individuals with orthopedic disabilities. Additional adaptations may need to be made as per individual requirements.

It's important to note that both Hero MotoCorp and Honda primarily focus on manufacturing standard motorcycles and scooters for the mass market. They don't offer specialized two-wheelers designed specifically for individuals with orthopedic disabilities.

TABLE 5.6: PROBABILITIES OF BEING EMPLOYED AMONG PWD BY VARIOUS CHARACTERISTICS, 2002					
Variable	ALL PWD	Urban male	Urban female	Rural male	Rural female
Male	1.88 *** (0.043)	-	-	-	-
Rural	0.206 *** (0.039)	-	-	-	-
Married	0.580 *** (0.043)	1.337 *** (0.103)	-0.522 *** (0.135)	1.176 *** (0.059)	-0.073 (0.890)
Age	0.229 *** (0.008)				
SC/ST	0.132 * (0.038)	0.044 (0.077)			
Postgrad. education	1.000 *** (0.191)	0.940 * (0.277)	1.787 *** (0.418)	0.235 (0.302)	2.724 * (0.792)
Disability from birth	0.425 *** (0.040)	0.298 ** (0.087)	0.216 (0.162)	0.361 *** (0.060)	0.762 *** (0.107)
Mental illness	-0.789 *** (0.102)	-1.596 *** (0.194)	-1.689 *** (0.420)	-0.614 *** (0.115)	-0.393 (0.311)
MR	-1.098 *** (0.132)	1.680 *** (0.238)	-2.834 (0.763)	-0.825 *** (0.170)	-1.350 *** (0.302)
Hearing disability	1.993 *** (0.084)	1.472 *** (0.174)	0.972 *** (0.262)	2.716 *** (0.134)	1.729 *** (0.149)
Speech disability	1.224 *** (0.096)	0.695 (0.165)	0.827 (0.341)	1.613 *** (0.144)	0.962 *** (0.192)
Locomotor disability	0.817 *** (0.067)	0.848 *** (0.104)	0.771 ** (0.214)	0.942 *** (0.090)	0.532 ** (0.142)
Vocational training	0.394 *** (0.097)	0.224 (0.142)	0.766 (0.234)	0.243 (0.151)	0.825 (0.296)
Received govt. aid	-0.179 * (0.052)				
*** = statistically significant at 1% level; ** = significant at 5% level; * = significant at the 10% level. Standard deviations in parentheses. Source: Mitra and Sambamoorthi (2005)					

My Take on the Report

1. Till now Hero Motocorp and Honda did not come up with any modified or special two wheeler vehicle specially for orthopedic disabled people. However, there are several light weight and less heighted bikes and scooters which can easily be modified for our target audience. Some of them are mentioned above.

2. As per the census data 57.5% of the total population are suffering from Locomotive disability. However, we need to find out through surveys or through their groups how many of them are eager to buy the modified two wheelers because here the financial factor also comes into the picture.

3. Until now neither company came up with any idea of modified two wheelers so, here the third party gets the benefit of modifying the vehicle and can enhance their market size.

Conclusion

1. While data collection from the Locomotive groups we get to understand the demand of the vehicle.
2. We need to also find the demographic area which can be targeted as per the number of people affected.
3. Finding how many men and women are working to generate demand.
4. Better marketing technique to reach out to customers.

References

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