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Space at your fingertips: Assessing the public's interest in space activities

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ABSTRACT

National space programs require the continuous interest and support of the public and government. Surveys and polls are the most commonly used method to monitor the public opinion regarding space activities. Such methods however can only measure the public view of a sample population of people at a specific moment in time. This paper examines the use of internet search trends to monitor and assess the public's changing interest in space activities. By analyzing the varying trends in online demand for information related to space activities, the impact of the government space programs as well as the factors that influence the public's interest are examined. Internet trend data has the potential to become a new metric to assess the relative performance of space policy initiatives, especially in terms of acquiring and managing the interest of the public. The continued interest and support of the public is vital for long term space programs, such as the lunar exploration program, to withstand the changing political environment of multiple administrations.

1. Introduction

In May 2013, the Korean government announced the ambitious goal of sending an orbiter and lander to the Moon using an indigenous Korean space launch vehicle as part of the 140 national goals of the newly inaugurated Park administration [1]. This was a giant leap compared to the previous space programs of the nation and marked the beginning of a new era in space development. Space had never been a part of the mainstream presidential agenda in previous administrations as such this announcement signified that space had now become a politically influential public issue.

Previous national space programs in Korea mostly consisted of technically progressive Earth bound satellite projects driven by the government to promote the growth of the local aerospace industry [2]. This began to change with the Korean astronaut program in 2008 during which the astronaut candidate was selected through a national public competition. This program suddenly brought government space programs into the public spotlight which led to both increased public support as well as persistent criticism. Such public interest and consequent awareness continued to expand with the highly publicized launch of the nation's first space launch vehicle, KSLV-I (Korea Space Launch Vehicle-I), and thereafter increased the importance of understanding the interests and opinion of the public.

Surveys and polls have been the most commonly used method to assess the public interest and opinion regarding space activities. The US has various polls which provide data that can be used to examine the public opinion on diverse issues such as identifying the supporters of space activities as well as assessing the expected level of funding for national space activities [3,4]. Korea has also conducted public opinion surveys for space activities, but they have been limited to occasional questionnaires targeted to reaffirm the support of the public for major government space programs or events thus providing only a discrete image of the public which is insufficient to assess the general interest or support of the public for space activities.

In order to overcome the discrete characteristics of periodic surveys, which measure the public opinion of a sample population of people at a certain moment in time, this paper examines the use of the internet to monitor and assess the public interest in space activities. As internet search requests are performed by the general public without boundaries in both content and time, such information will be able to provide a non biased view of what lures the fingertips of the public regarding space activities.

This paper first examines the results of the aforementioned

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0265-9646/

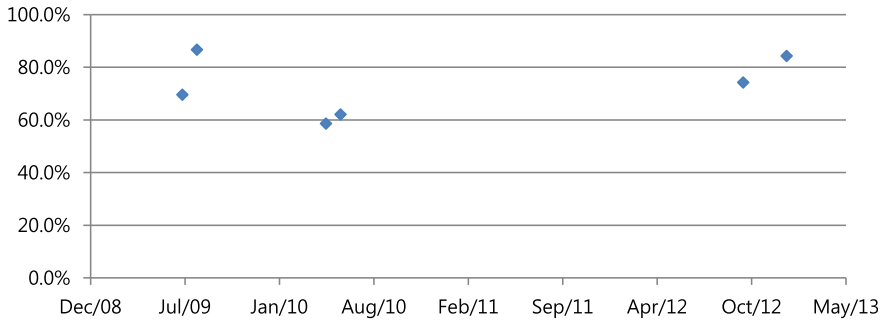

Fig. 1. Support for the KSLV-II program.

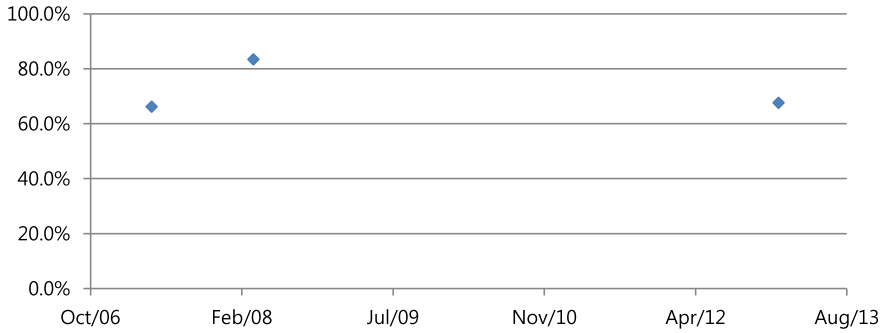

Fig. 2. Support for a lunar exploration program.

surveys which provide a partial view of the public opinion regarding space activities in Korea. Thereafter the paper investigates the possible use of internet trend data to complement such results. An online tool that monitors the trend in volume of internet search requests is used to analyze the changing trends in demand for information related to space activities. The impact of the major government space programs as well as other space related activities with respect to the changing trends are assessed to uncover the potential factors that may influence the public's interest in space activities.

2. Asking the public

Most of the public surveys in Korea regarding space activities have been taken either before or after the implementation of major national space programs. Consequently the surveys usually focused on questions regarding the public awareness and support of specific programs rather than general questions on overall national space activities.

A 2007 KARI (Korea Aerospace Research Institute)[1] survey, taken after the first Korean astronaut had been selected and before the actual flight to the ISS (International Space Station), included general questions regarding the public awareness of space activities in Korea. The survey revealed that 80.3% of the population did not know who was responsible for implementing national space programs in Korea, 77.7% did not know what KARI did, and 3.7% thought that NASA was responsible for national space programs [5]. These results have most likely improved after the successful completion of the astronaut program,[2] but they reflected the limited interest and awareness of the public in national space activities at the time.

2.1. Support for the KSLV-II program

Fig. 1 shows the changing percentage of respondents that supported the development of an indigenous space launch vehicle, KSLV-II, before and after the three launches of KSLV-I[3] [7–12]. The plot shows that, although short term support for the program increased after each launch, there was an overall drop in support between the first and second launches, later to be recovered by the time of the last launch. The decrease in support was most likely due to the disappointment and following criticism of the public caused by a highly debated issue on the over reliance on Russian technology in developing the KSLV-I launch vehicle which led to seemingly uncontrollable delays in the launches.

2.2. Support for lunar exploration

Fig. 2 shows the percentage that supported a lunar exploration program before and after the spaceflight of the first Korean astronaut and before the last launch of KSLV-I [5,6,11]. It can be seen that there was a rise in support soon after the astronaut program, but four years and two failed KSLV-I launches later such support dropped back to its original level. This was possibly due to an overall loss in interest and enthusiasm for space programs that had been built up during the highly publicized astronaut program, but lost after undergoing the strenuous hurdles of the KSLV-I program.

2.3. Impact of national space programs on interest in space

Fig. 3 shows the percentage of respondents whose interest in

[1] The Korea Aerospace Research Institute is responsible for the planning and implementation of all national space programs in Korea.

[2] Unfortunately, the same questions were not included in any of the subsequent surveys.

[3] The first and second launches failed due to anomalies with the vehicle. The third launch was successful in orbiting a scientific satellite into orbit.