Membership Growth Goals Meet Demographic Trends: The Case of the Scout Association of Hong Kong

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Abstract

System dynamics models have often been used to help organizations deal with real or potential problems. This research builds a system dynamics model that attempts to link the enrollment goals of the Scout Association of Hong Kong (SAHK) with the reality of a Hong Kong's declining birth rate and restrictive immigration policies. The initial model indicates that larger proportions of available youth would have to be attracted to scouting to maintain their current market share with respect to youth served, and this would have to be greatly expanded to accommodate membership growth goals. Without additional immigration or a higher birth rate, the SAHK will have to obtain overall levels of youth participation at almost three times their current level, even with higher quality levels that attract a higher proportion of eligible youth.

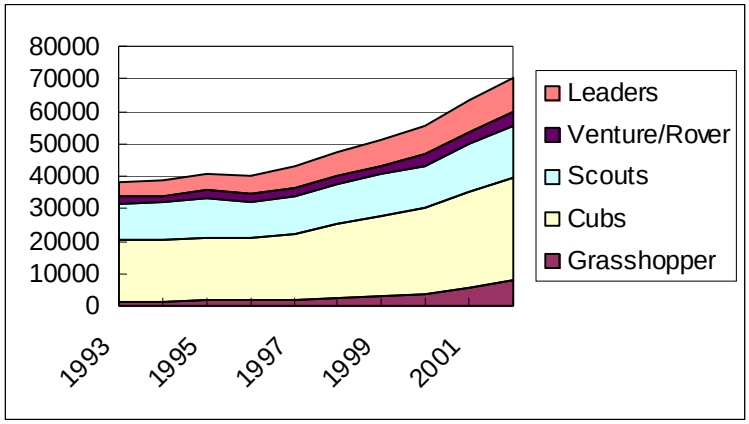
Introduction

In Hong Kong the Scout movement has a long history, in part because of Hong Kong's long status as a British colony. In 1997, the return of Hong Kong to China required the Scout Association of Hong Kong (SAHK) to change some of its designators to reflect this new reality. For instance, the Queen's Scout Award was renamed to Special Administration Region Scout Award. However, unlike some other institutions in Hong Kong, local Chinese had assumed the top leadership positions in the Scout Association of Hong Kong during the early 1960s and it was not affected by the movement of expatriates back to the United Kingdom. Thus, structural and leadership adjustments were not necessary.

In 1997 the SAHK selected a new Chief Commissioner. Generally, the SAHK has gone through period of growth, followed by periods of consolidation. The new commissioner set impressive membership growth goals. There were dramatic membership increases in all

scouting categories, including adult leaders, as a result ot these growth goals and policies (See Figure 1).

Fig. 1. Scouting population 1993-2002.



There is a tendency for organizations to equate growth with success, especially those that serve the public. Growth also can also pose hidden problems and is often associated with lower profit rates in business firms (Dundas & Richardson, 1982). In other cases there are physical constraints to growth related to the consumption of resources (Meadows et al., 1974). Organizations can also face growth constraints related to demographic or social changes, such as Hall and Menzies (1983) outlined in their study of a Curling Club fighting to maintain its membership levels in the face of changes in preference toward different sports. The carrying capacity of the environment can also constrain growth, as Sterman (2000) points out in his discussion of why Easter Island was unable to sustain its population levels. In the case of the Scout Association of Hong Kong, the number of volunteer leaders and sites available for use as meeting venues pose some membership growth constraints but these probably can be managed over the longer term. Like many organizations the leadership of the SAHK has the view that hard work, leader development, training programs and the inherent benefits of scouting will always provide a pool of members, especially with respect to units geared for younger age groups.

Although Hong Kong is now part of China, movement between Hong Kong and the Chinese mainland is still highly restricted. Even children of Hong Kong parents, who were born in China, find that relocation to Hong Kong can take several years. Thus, population growth depends largely on local births, and these have been declining dramatically. The birth rate has dropped from 37 per 1,000 people in 1961 to 7.2 per 1,000 people in 2001. Hong Kong's high cost of living, small living spaces, limited space in the best schools, later age of marriage and long working hours act to discourage large families. While the birth rate may have reached a stationary minimum, there is no reason to suspect an increase in the birth rate in the long term, or a liberalization of immigration policy in the short term, with respect to individuals from mainland China.

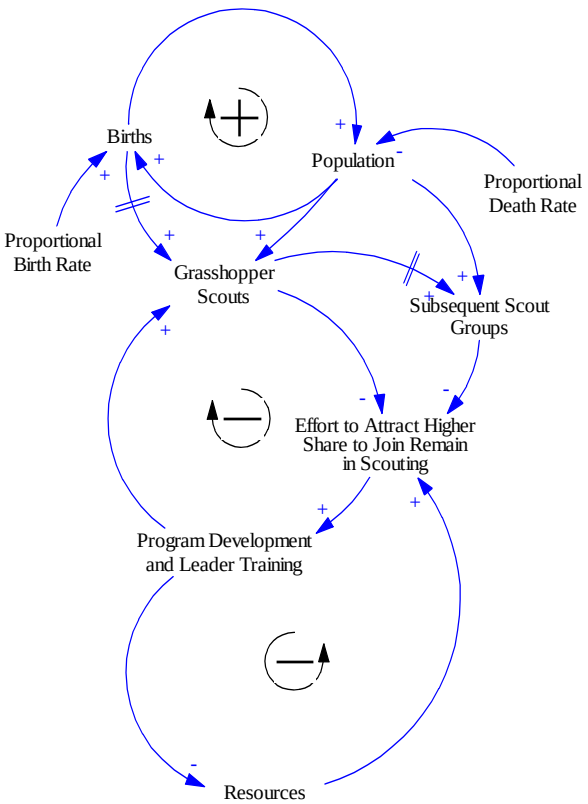
With close to seven million residents and a 7% unemployment rate there is little current worry about the lack of population growth, except for firms in a few high technology areas. However, for an organization such as the SAHK, the implications of a continuous decline in the population and a sustained low birth rate will dramatically impact the age groups it is most committed to serving over the next two decades. The leadership of the

SAHK has not expressed any apparent worry about the dwindling number of potential recruits, in part because it has experienced dramatic growth in recent years. In addition, the SAHK has been actively trying to turn itself into a learning organization (Mak, 2003) as a way of ensuring that it remains an important organization serving youth in the community. In this respect it is being proactive about increasing its attractiveness to those not involved in scouting and to increase the retention rate of those involved in the movement. However, this implies a market share strategy, with no gain in actual numbers if the absolute youth population continues to decline, which means that it will cost more resources to attract the same number of young people to scouting.

Descriptive Model

The model has three basis components, population, program enhancement and resources, as can be seen on the generalized causal map depicted in Figure 2 (See Appendix A for the detailed vensim documentation of the model). The decline in the proportional birth rate means that those moving out of younger age segments are larger than those entering those age segments. Since the life expectancy of Hong Kongers has increased dramatically

Fig. 2 Causal map
of population and resource
dynamics facing the Scout Association
of Hong Kong



over the past twenty years, population has continued to grow. This overall growth in population may be masking the impact of lower levels of youth population, although the government has closed a number of primary schools and proposed changes in the delivery of heath care services to account for the aging of the population. However, the implication is clear, to maintain current membership levels, or to achieve even more ambitious growth goals, will require that the SAHK attract higher proportions of youth in the age groups it is now serving.

The second loop relates to action that the SAHK has been taking to increase its membership. Activities designed to making scouting more attractive include, higher levels of training, program development, trying to expand the number of venues available to the SAHK, and actively recruiting both scouts and leaders. These activities are designed to offset the continuous loss of members that is reflected in the population loops' dynamics.

The final loop represents another important issue. The activities needed to attract a larger and larger percentage of the ever smaller age groups means that the costs of attracting members will increase. This is also well recognized in the business literature, where the cost of acquiring new customers is always more than the cost of retaining existing customers.

The causal map has been presented at a very general level here because to include all the variations of the decision variables would make for a cluttered presentation and it is better to leave the operational details to the discussion of the model. In general, the SAHK is more interested in the important dynamics related to population than in other aspects that will have minor impacts on the organization. We found that there was a general reluctance to expand the boundary of the model beyond the impact of declining youth population.

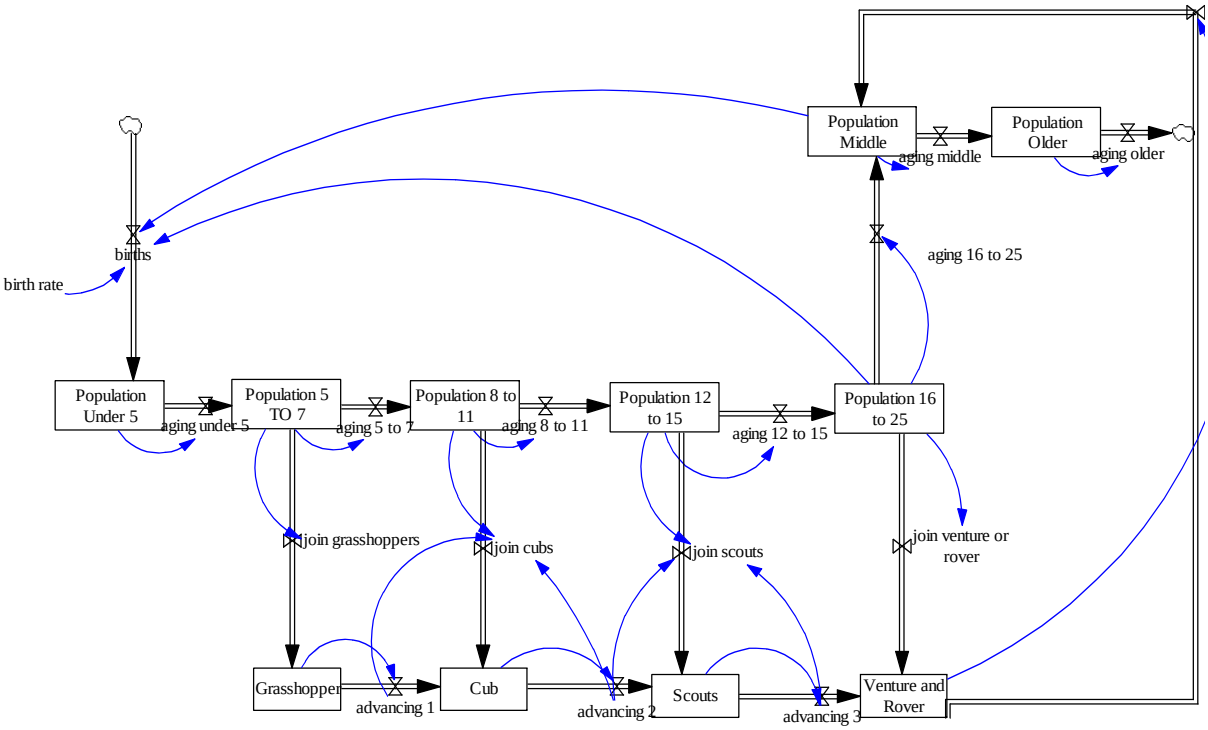
Impact of Lower Birth Rates

The model begins with a basic population model that has been adapted to Hong Kong's birth and death rate. Figure 3 depicts the basic elements of the population segment of the model. While the causal map tends to give the view that population is growing, Hong Kong is similar to many developed economics where the birth rate is no longer able to sustain the current level of population, and it is only increase longevity and immigration that accounts for population growth. While it may be necessary to adapt this model to account for immigration in the future, the general resistance towards increased immigration in Hong Kong is the reason for its non-inclusion. In addition, we only run our model for a 25 year period, and are really focused on the next 15 to 20years, so immigration is less relevant, although it remains the obvious policy lever at the governmental level and it is likely to eventually use it as the rate of young people entering the work force continues to decline.

The birth rate dynamics will come into play because, as can be seen from Figure 1, the SAHK has been following an aggressive growth policy in recent years. This means that they are not just increasing numbers, but in the face of a falling birth rate, are actually increasing their market share of the youth market. One issue in examining the population dynamics is the degree to which it is feasible to continue achieving growth goals in the future, or even to sustain the current population of the various scouting groups. The SAHK is a not-for-profit organization with a heavy reliance on volunteers, who normally come from

the parents of the current scout population, so the population dynamics of younger age groups will also impact in other areas, such as the population of potential leaders.

Fig. 3. Hong Kong's population as a feed into the scouting population



Originally, we used a single stock variable to represent the population, but later this was expanded to a simple aging chain, at the suggestion of a reviewer. In building the chain we followed the example of Sterman (2000). The chain is helpful because its population stock variables correspond to the age segments of the various scout groups. Each population stock variable represents the total population in that age group that is currently not involved in scouting. The aging chair also makes it easier to examine the impact of population changes on each of the different scouting groups, and to ensure that the population dynamics were consistent with what was happing in Hong Kong. The chain used is depicted in Figure 3, although a number of auxiliary variables and the quit flows have been deleted from the figure to enhance its presentation. In the full model, those who quit any of the scouting groups are returned to the corresponding population group stock variable.

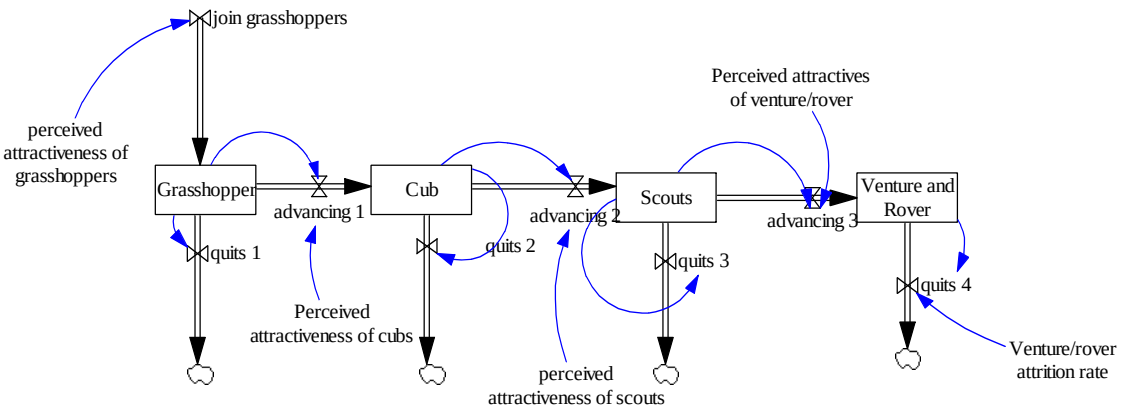
The population under 5 and the birth rate are obviously critical to the population of the Grasshoppers and subsequent levels of scouting while the middle group, as well as those in the 16 to 25 group as seen as the primary age groups with respect to having children. Of course, as these child bearing groups decline in total population, even a stable birth rate at the current level will lead to further declines in the stock of people in the lower age population groups. Including them is important, especially if an immigration input is to be added to the model at a later stage to examine the impact of more liberal immigration policy, especially of young people coming to Hong Kong, who would then have children who would enter the lowest age group and begin to move through the system.

Joining, Retention and Ongoing Recruiting

Grasshopper scouts, which serve the age group between 5 to 7 years, are the fastest growing scout section in Hong Kong. This section is also important because the SAHK indicated that 85% of Grasshopper scouts move on to become Cub scouts. This group also presents a special challenge for the SAHK because it must be recruited externally. Currently, more than 80,000 young people become eligible to join as Grasshopper scouts each year, although this number will decline rapidly over the next twenty years, given current population dynamics. Thus, since the current enrollment represents less than 2% of those eligible to join, it is quite understandable that drops in birth rates are not considered a serious threat to the number of youths participating in this scouting program by SAHK officials. However, to maintain current enrollment levels in the Cub scouts will require larger percentages of the potential population, and the decline in this population group will make this much harder to achieve growth in the upcoming two decades.

Cub scouts, scouts, Venture scouts and Rover scouts benefit from boys and girls moving up to the next scouting section. However, the advancement levels vary with almost all Grasshopper scouts moving into Cub scouts, while 65% of Cub scouts move on to become Scouts, and less than 20% of Scouts move into the Venture scouts and Rover sections. In addition, many young people leave scouting before they reach the age where they are eligible to advance to become a Venture or Rover scout. SAHK officials indicate that they obtain very few members at the Rover and Venture level who are currently not involved in scouting.

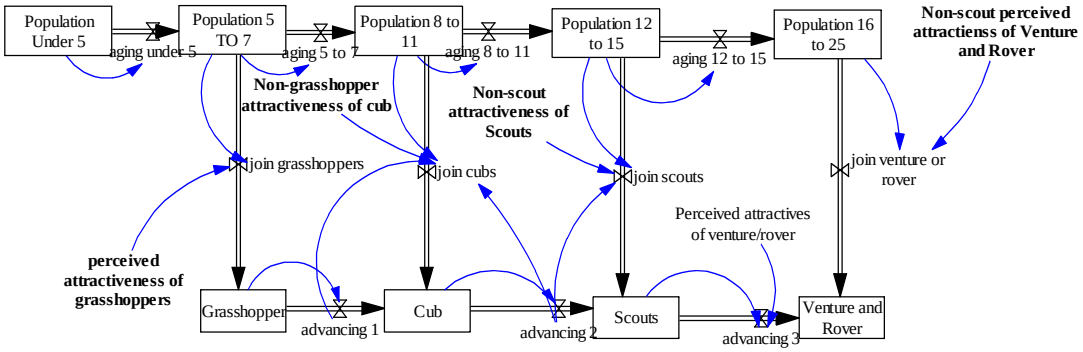
Fig. 4 Model that highlights impact of scouts leaving.



As can be seen in Figure 4, scouting also loses members when individuals quit or chose not to advance to the next level. In some cases, this is because they become involved in alternative activities, which leaves little time for scouting. This is certainly true at the Scout, Venture scout and Rover scout levels, where activities at school and extracurricular

activities with school mates become more important than participating in scouting. In this model the perceived attractiveness of each of the scouting activities is a constant that is related to historical percentages of moving from one group to the next. Quits represent the natural attrition rates that the SAHK has experience, as well as those not passing on to the next scouting group. These quits return to the potential population stock variable related to their age group. Since the SAHK has no information related to these individuals returning to scouting at a rate different from others who had not been involved in scouting, there was no need to establish separate population stock variables those that quit scouting. In each case we attribute the desire to leave as related to the attractiveness of scouting, although this is obviously be related to its attractiveness versus other activities.

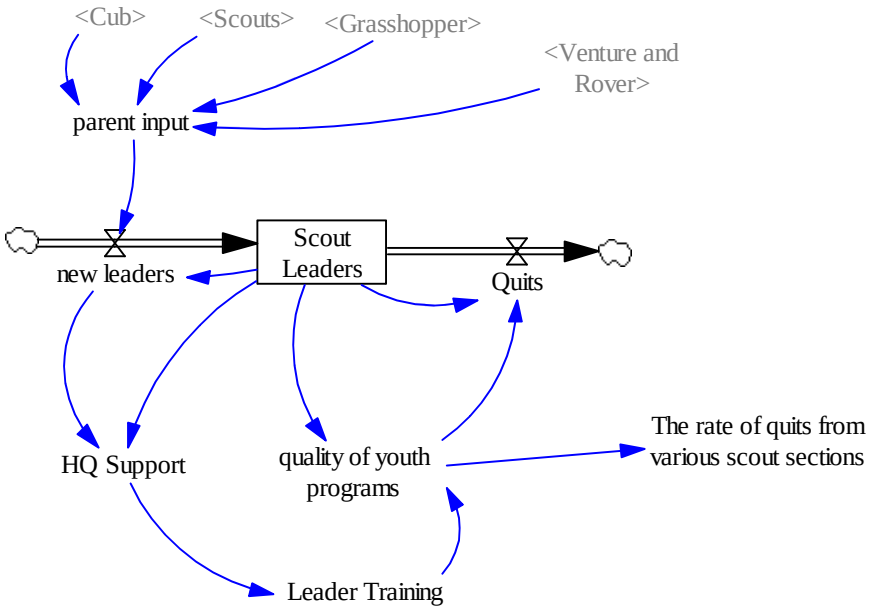
Fig. 5 Movement from
non-scouts to scouts



While the majority of Cub scouts, Scouts, and Venture and Rover scouts come from the lower age scout sections, there is also considerable movement from the general population into scouting. The largest group involves Cub scouts, in large part because this is the largest scouting section. It is for this reason that a separate attractiveness variable was used to measure the attractiveness of scouting to their respective non-scouting populations. These are depicted in bold type in Figure 5. In each case the index reflect the actual experience of the SAHK. However, it should be noted that demand for spaces at the Cub scout level probably exceeds the available places, and outside entry is expected to make up for population declines in the short term.

This final set of relationships are depicted in Figure 4, although these service and resource relationships need further development. Obviously, the links only relate to the total number of adult leaders and the training provided. However, discussions with SAHK officials reveal that these are the essential factors that do determine quality, in terms of how it directly relates to scouts. Obviously, formulating sound strategies and maintaining the overall image of scouting is important, but they felt that it was difficult to characterize these activities, except in a very subjective fashion after the fact. Young people are attracted to scouting, in many cases, based on the feedback they receive from others already involved in scouting activities. The quality depends on an adequate supply of trained leaders, who tend to come from the parents of members, and they tend to leave if their children abandon scouting for other activities.

Fig.6. Factors affecting
the quality and attractiveness
of scouting.



New leaders also increase the need for headquarters support. More training has to be provided and there are some increased administrative tasks associated with integrating new leaders into the system Of course, the number of current leaders has an impact on the rate at which leaders need to be recruited, while also providing the work force that recruits these leaders. In Hong Kong, housing estates management firms often assign employees to lead scout groups as a feature to make their building maintenances programs more attractive. However, this involves a certain cost and would have to have the support of the owners, most of whom are parents, but only a minority of which would have a child currently involved in scouting. Thus, the image of scouting is important because of its impact on the willingness of parents to be trained and serve as adult leaders and the desirability of private estate management firms to contribute employee time to serve as scout leaders. The quality of programs has been modeled to also have an impact on the turnover rate of scout leaders, based on the assumption that high quality will reduce turnover, although there is a certain amount of turnover associated with parent-leaders whose children decide to no longer continue in scouting. It also feed back into the quit rate for the different scouting sections creating a vicious cycle where fewer scouts lead to fewer leaders, which leads to lower quality, which in turn further increases the number of quits.

Use of Model to Examine Membership Dynamics

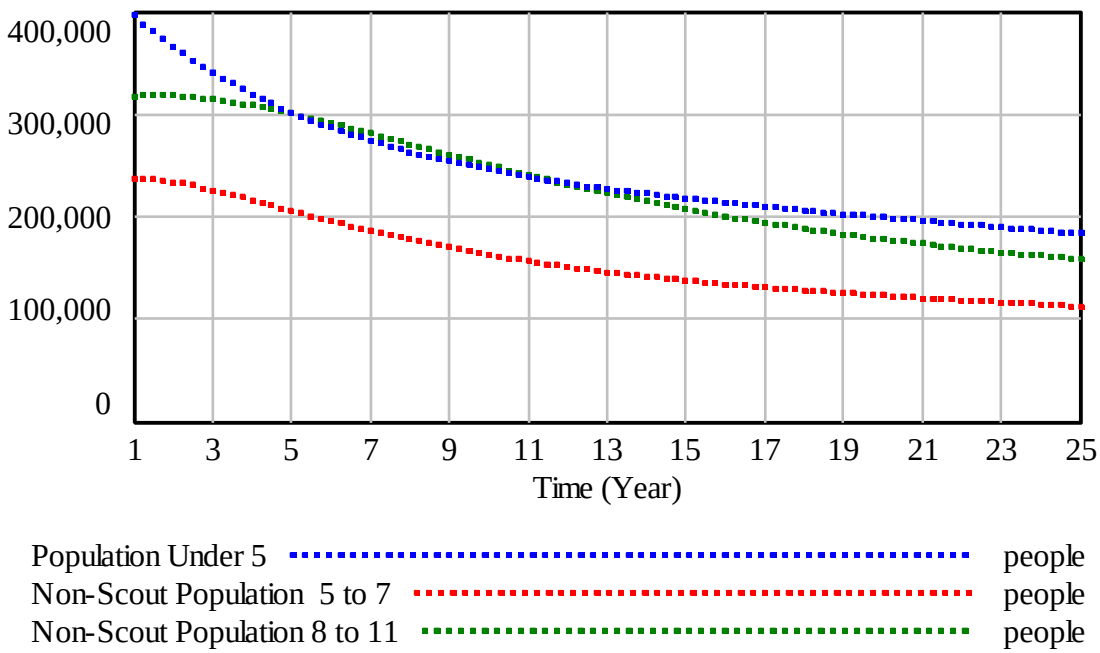
Only the basis run of the model is reported here, although policy experiments are planned as part of our future research agenda. In this section the various components are discussed. It will begin with a discussion of the population, which is related to number of youth in the pool of potential scout members. This will be followed by a discussion of the

movement between the various scout sections. In the final section there will be some discussion of the impact of the quality of the SAHK's youth programs on their ability to maintain service levels in the event that current population trends continue and immigration remains highly restricted.

Population Dynamics

The results indicate that the potential population for the Grasshopper, Cub and Scouts could decline dramatically during the next 25 years. While the drop is steepest in the under five population, the declines are also steep with respect to the non-scout potential population segments from which both the Grasshoppers scouts and Cub scouts draws. What is even more alarming is the fact that population in these groups drop by almost 30% in just 10 years. Thus, penetration rates will have to increase to maintain present membership levels. Obviously, the SAHK could be expected to take more aggressive steps to counter these trends, but as many system dynamics studies show, exponential declines and increases are seldom recognized at their early stages (Ford, 1999), and the model developed here assumed that the SAHK would enhance quality and be more aggressive in attempting to attract people to their youth scouting programs. This model does not include immigration, although it is likely that the government might have to respond to ongoing low birth rates with higher levels of immigration, especially for young people.

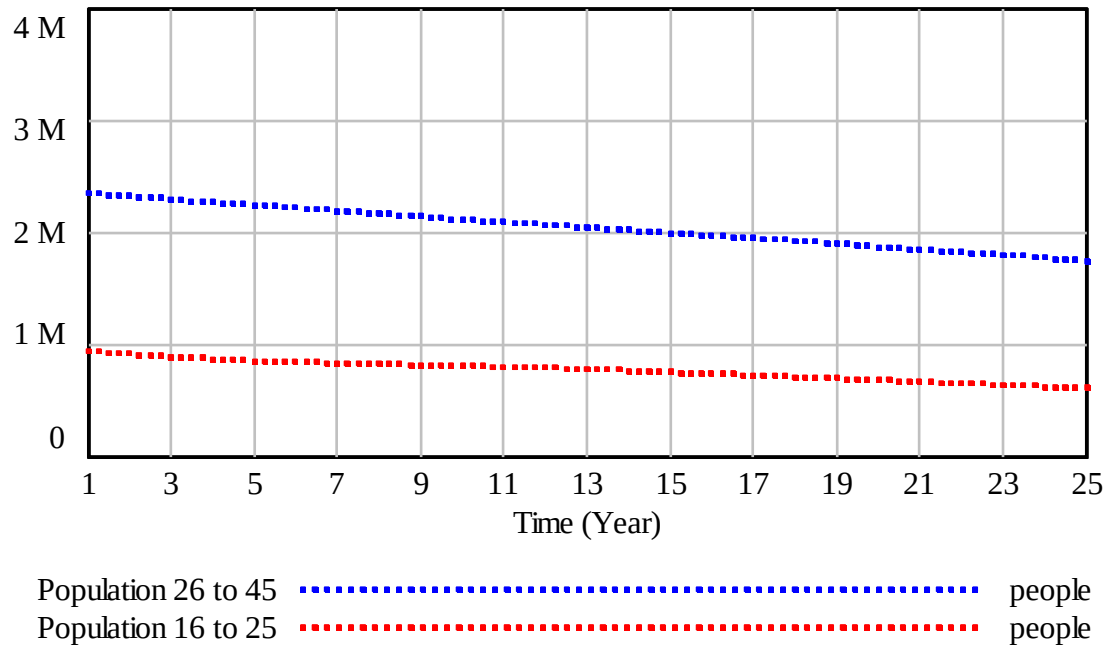
Fig. 7. Population for age groups that feed various scout sections in Hong Kong over next 25 years.



An additional impact depicted in Figure 8 shows that the population groups most likely to have children will also decline, which means even a slight increase in the birth rate will have very little positive impact on population levels. In the longer term, there will obviously be a policy response, by either the Chinese or Hong Kong government, but it is

very possible that the response may not occur until the system effects have begun to operate in ways that seriously affect organizations such as the SAHK.

Fig. 8. Simulated population trends for the age groups most likely to have children.

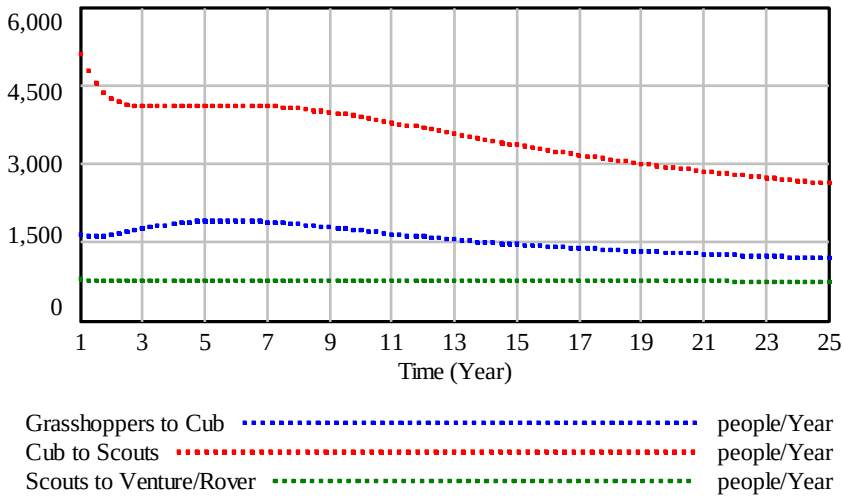


Retention and Attraction

One of the key aims of the SAHK is attracting young people to their programs and retaining them as they move from Grasshopper scouts to Cub scout, and from Cub scouts and Scouts and then on to Rover scouts and Rover scouts. Figure 9 shows that the retention dynamics projected for each of the scouting sections based on the current rates of retention. However, as the population decline begins to affect the actual population in the lower age scout sections the actual number of individuals moving on to the next section will decline. The only place that will not be affected is at the Venture/Rover scout level, but this is because the rate of retention is already so low with respect to Scouts moving on to become Venture/Rover scouts.

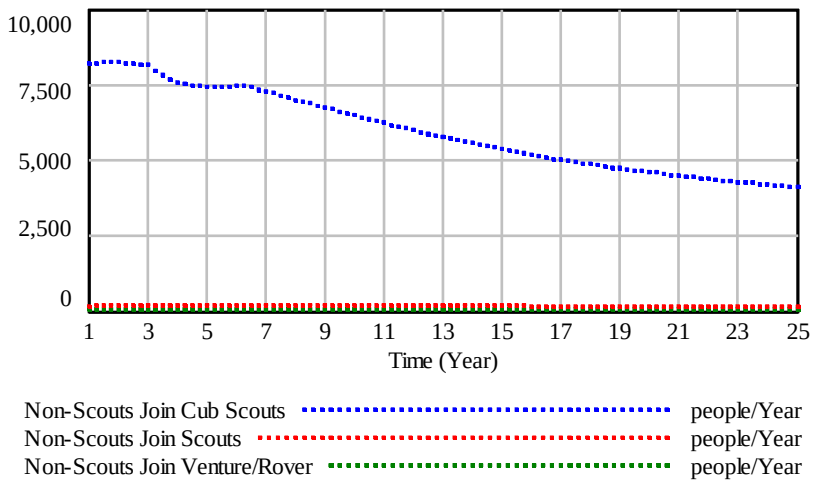
The dynamics suggest that the solution is to attract more into scouting from outside scouting, but this is extremely difficult to do at older ages. In addition, as was discussed earlier, parents of scouts provide the major source for new leaders, and as the population of scouts declines it will put a strain on the number of volunteer leaders, making it very difficult to make dramatic quality improvement in the various scout sections. Enhanced quality is what will be needed to attract members from outside scouting, and this will be difficult to accomplish.

Fig. 9. Yearly movement of scouts from one section to the next section.



The impacts of the decline in the birth rate are easier to spot when the trend in youth joining from the general population are examined, because these are more directly affected by the population. Currently, there is little movement from non-scouts into the Scouts or Venture and Rover units, as can be seen when they are depicted on the same numerical scale as the Cub scouts. There is massive movement from non-scouts into Cub scouts, because this was the traditional point of entry before the Grasshopper scouts were established.

Figure 10. Number of youth joining scouting sections from the youth population who are not currently involved in scouting.



There are areas in Hong Kong that do not have a well developed scouting movement. However, the Hong Kong government is currently facing a budget crisis, and it is unlikely

that schools will receive more funds to establish scout groups. Thus, if geographical expansion is to be used as a strategy for reaching membership goals, the SAHK will have to find the resources needed to achieve these goals. However, the simulated results below suggest that the most immediate impact on scouting will occur in its largest unit, the Cub scouts. An examination of Figure 11 also suggests that about year 17, the other scouting units will begin to experience declines in their membership.

Fig. 11. Membership of various scout sections

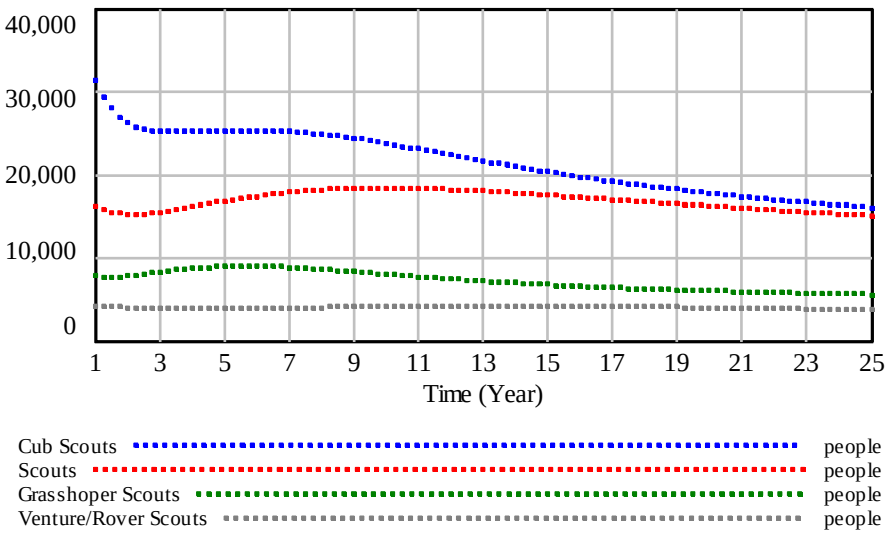
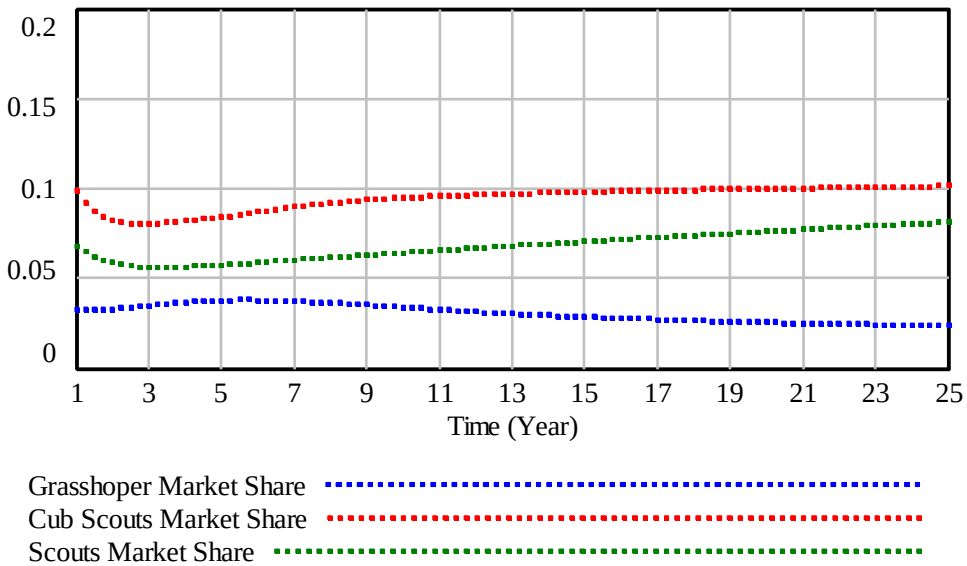


Fig. 12. Penetration of market share associated with future membership projections for various scout sections.



While we have suggested that dramatic increases in market share of the youth population will be needed to offset absolute membership losses, the simulated market shares, presented in Figure 12 suggest this may be possible. Grasshoppers appear to be optimally placed, since their share will actually drop based on the current level at which they attract members from their age group. Thus, they will be best positioned to offset population induced losses. If higher rates of participation can be achieved for this age group, the retention of these Grasshopper scouts will have a positive impact on the member in Cub scouts and Scouts.

While the market shares of their respective populations increase, even while they are losing total membership, the simulation market share rates are under 10% for both the Cub scouts and Scouts, which means there will be opportunities to increase their membership if they can enhance or at least maintain present levels of quality.

Quality and Leadership

One of the things built into our model is that programs will continue to improve, and that high levels of training will be maintained. The reason for this is that our discussion with people in leadership positions at the SAHA indicated to us that this was a primary goal. In addition, without a high quality program and good leaders the possible decline in the youth who joined would be less relevant.

Our analysis indicates that retaining and maintaining leaders for the various scout sections, but especially the fast growing Grasshopper and Cub scout sections will be extremely important.

Validation

The validity of the model was supported by documentation that was provided by the SAHK. These included copies of their annual reports, which outline their activities, goals, and current membership. In addition, the SAHK has appointed a number of Task Forces over the past decade and we were provided access to these reports. Finally, one of the authors recently completed a doctoral dissertation related to the recently efforts of the SAHK to increase its efficiency, effectiveness and increase its membership and training levels. This provided additional information. Finally, and most importantly, we were able to discuss and model and its findings with members of the governing board of the SAHK, and make adjustments when the conclusions and links we formulated were not consistent with their understand of those links and dynamics.

The Hong Kong government systematically conducts a population census every 5 years, to which we had access. In addition, they collect annual information related to deaths, birth and marriages. Thus, we had a very high quality of population information for the portion of the model dealing with the overall population levels.

The model was checked for unit consistency and several adjustments were made to ensure that there were no negative flows in the scout membership stock variables. The time step was reduced to ensure that the results were not distorted by selecting too large a time step. The model has yet to be tested for extreme conditions because we have yet to add policy input variables to the model

Conclusions

The population decline in Hong Kong is not unique. Japan, many countries in Europe and Russia are also experiencing declining birth rates. System dynamics provides a tool for organizations, such as the SAHK, as well as other governmental and business organizations to examine how these population trends will impact on their goals, especially any related to growth. Part of our future research agenda is to input policy variables, such as immigration to test the implications of using this as a policy lever.

Growth goals are often made based on the assumption that there will be no response by competitors. While organizations devoted to serving others, as not-for-profit organizations, do not usually like to refer to other organizations as competitors, there is also competition by similar organizations to serve the same youth audience. While we have discussed the likely liberalization of immigration policy, this model is fairly liberal in that we have not assumed any negative effects from the increased efforts of other youth-serving organizations to also increase their membership in the light of a declining population.

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Appendix A

Model Documentation

01) advancing 1=(Grasshopper/4)*Perceived attractiveness of cubs
Units: people/Year
(02) advancing 2= ((Cub/4)*perceived attractiveness of scouts)
Units: people/Year
(03) advancing 3= ((Scouts/4)*"Perceived attractiveness of venture/rover")
Units: people/Year
(04) advancing 4= (Venture and Rover/9)

Units: people/Year
(05) aging 12 to 15= Population 12 to 15/ 4
Units: people/Year
(06) aging 16 to 25= Population 16 to 25/ 10
Units: people/Year
(07) aging 5 to 7= Population 5 TO 7 / 3
Units: people/Year
(08) aging 8 to 11= Population 8 to 11 / 4
Units: people/Year
(09) aging middle= Population Middle / 20
Units: people/Year
(10) aging older=
Population Older / 33
(11) aging under 5= Population Under 5 / 5
Units: people/Year
(12) birth rate= 0.01431
Units: fraction/Year
(13) births= birth rate*(Population 16 to 25+Population Middle)
Units: people/Year
(14) Cub= INTEG (+advancing 1-advancing 2-quits 2+join cubs, 31400)
Units: people
(15) FINAL TIME = 25
Units: Year
(16) Grasshopper= INTEG (join grasshoppers-quits 1-advancing 1,7774)
Units: people
(17) HQ Support= 0.8+(new leaders/Scout Leaders)
Units: percentage
(18) initial pop 16 to 25=944337
Units: Person
(19) initial pop 5 to 7=237732
Units: Person
(20) initial pop 8 to 11= 316976
Units: Person
(21) initial pop infant=396220
Units: Person
(22) initial pop middle= 2.34584e+006
Units: Person
(23) initial pop older=2.20951e+006
Units: Person
(24) initial population 12 to 15=237732
Units: Person
(25) INITIAL TIME = 1
Units: Year
(26) join cubs=MIN((Population 8 to 11*"Non-grasshopper attractiveness of cub"),(advancing 2+quits 2-advancing 1))
Units: people/Year
(27) join grasshoppers= perceived attractiveness of grasshoppers*Population 5 TO 7
Units: people/Year
(28) join scouts="Non-scout attractiveness of Scouts"*Population 12 to 15
Units: people/Year

(29) join venture or rover= population 16 to 25*"Non-scout perceived attractiveness of Venture and Rover"
Units: people/Year
(30) Leader Training=SMOOTH(8000*HQ Support, 1)
Units: people
(31) new leaders= IF THEN ELSE(parent input > 0.15*Scout Leaders, 0.15*Scout Leaders, parent input)
Units: people/Year
(32) "Non-grasshopper attractiveness of cub"=0.02591
Units: percentage
(33) "Non-scout attractiveness of Scouts"= 0.0008
Units: percentage
(34) "Non-scout perceived attractiveness of Venture and Rover"= 0.0001
Units: percentage
(35) parent input=0.02*(Cub+Grasshopper+Scouts)+0.002*Venture and Rover
Units: people
(36) Perceived attractiveness of cubs=0.85
Units: percentage
(37) perceived attractiveness of grasshoppers=0.017227
Units: percentage
(38) perceived attractiveness of scouts= 0.65
Units: percentage
(39) "Perceived attractiveness of venture/rover"=0.2
Units: percentage
(40) Population 12 to 15= INTEG (-aging 12 to 15+aging 8 to 11-join scouts+quits 3,initial population 12 to 15)
Units: people
(41) Population 16 to 25= INTEG (aging 12 to 15-aging 16 to 25-join venture or rover, initial pop 16 to 25)
Units: people
(42) Population 5 TO 7= INTEG (+aging under 5 - aging 5 to 7-join grasshoppers+quits 1, initial pop 5 to 7)
Units: people
(43) Population 8 to 11= INTEG (aging 5 to 7 - aging 8 to 11-join cubs+quits 2,
initial pop 8 to 11)
Units: people
(44) Population Middle= INTEG (aging 16 to 25 - aging middle+advancing 4,initial pop middle)
Units: people
(45) Population Older= INTEG (aging middle - aging older, initial pop older)
Units: people
(46) Population Under 5= INTEG (births - aging under 5,initial pop infant)
Units: people
(47) quality of youth programs=IF THEN ELSE(Leader Training/Scout Leaders>1, 0.9, Leader Training/Scout Leaders)
Units: dimensionless
(48) Quits=MAX(0.01*Scout Leaders, (1-quality of youth programs)*Scout Leaders)
Units: people/Year

(49) quits 1= (1-quality of youth programs)*(Grasshopper)+(Grasshopper/3)*(0.15)

Units: people/Year
(50) quits 2=Cub * (1-quality of youth programs)+(Cub/4*0.35)
Units: people/Year
(51) quits 3=(1-quality of youth programs)*Scouts+(Scouts/4*0.2)
Units: people/Year
(52) quits 4=Venture and Rover*"Venture/rover attrition rate"
Units: people/Year
(53) SAVEPER = TIME STEP
Units: Year [0,?]
(54) Scout Leaders= INTEG (new leaders-Quits, 10621)
Units: people
(55) Scouts= INTEG (+advancing 2-advancing 3+join scouts-quits 3, 16125)
Units: people
(56) TIME STEP = 0.25
Units: Year [0,?]
(57) Venture and Rover= INTEG (advancing 3-advancing 4+join venture or rover-quits 4, 4134)
Units: people
(58) "Venture/rover attrition rate"= 0.12
Units: percentage

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