

>

# Mathematics in STEM – transition issues

## UCAS – Admissions reform and STEM

24 May 2012



**Mary Curnock Cook**  
**Chief Executive**

**UCAS**

## > Admissions Process Review

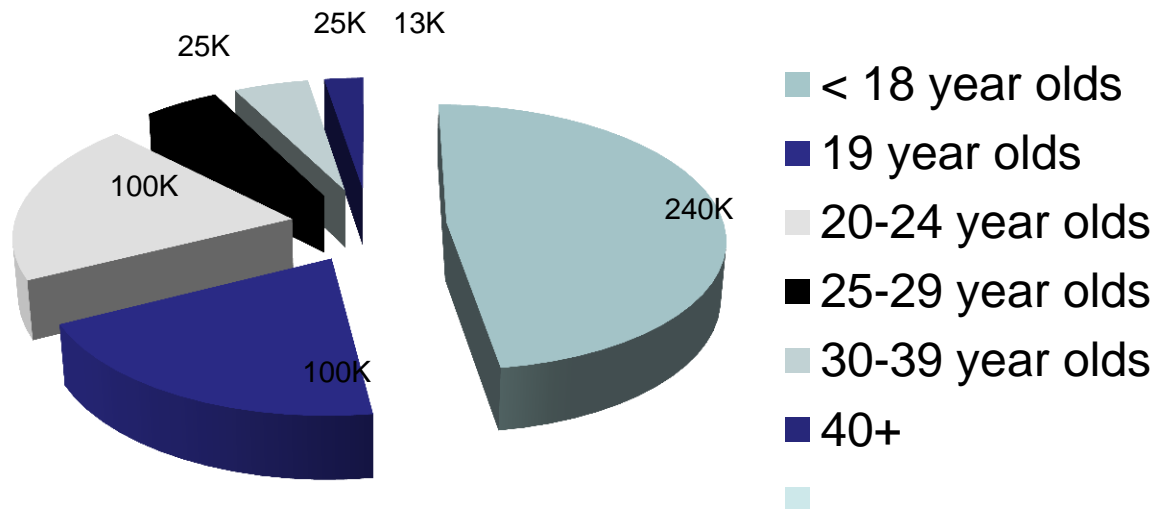


- PQA not going ahead
  - *Felt too much like ‘one big clearing’*
  - *Concerns about WP*
  - *Concerns about IAG*
  - *Difficulties with academic and exam timetables across four countries of UK*
- Progress on
  - Sorting out clearing
    - *Late application window offers choice for applicants*
  - Improvements to process help applicants and HEIs, and drive efficiency

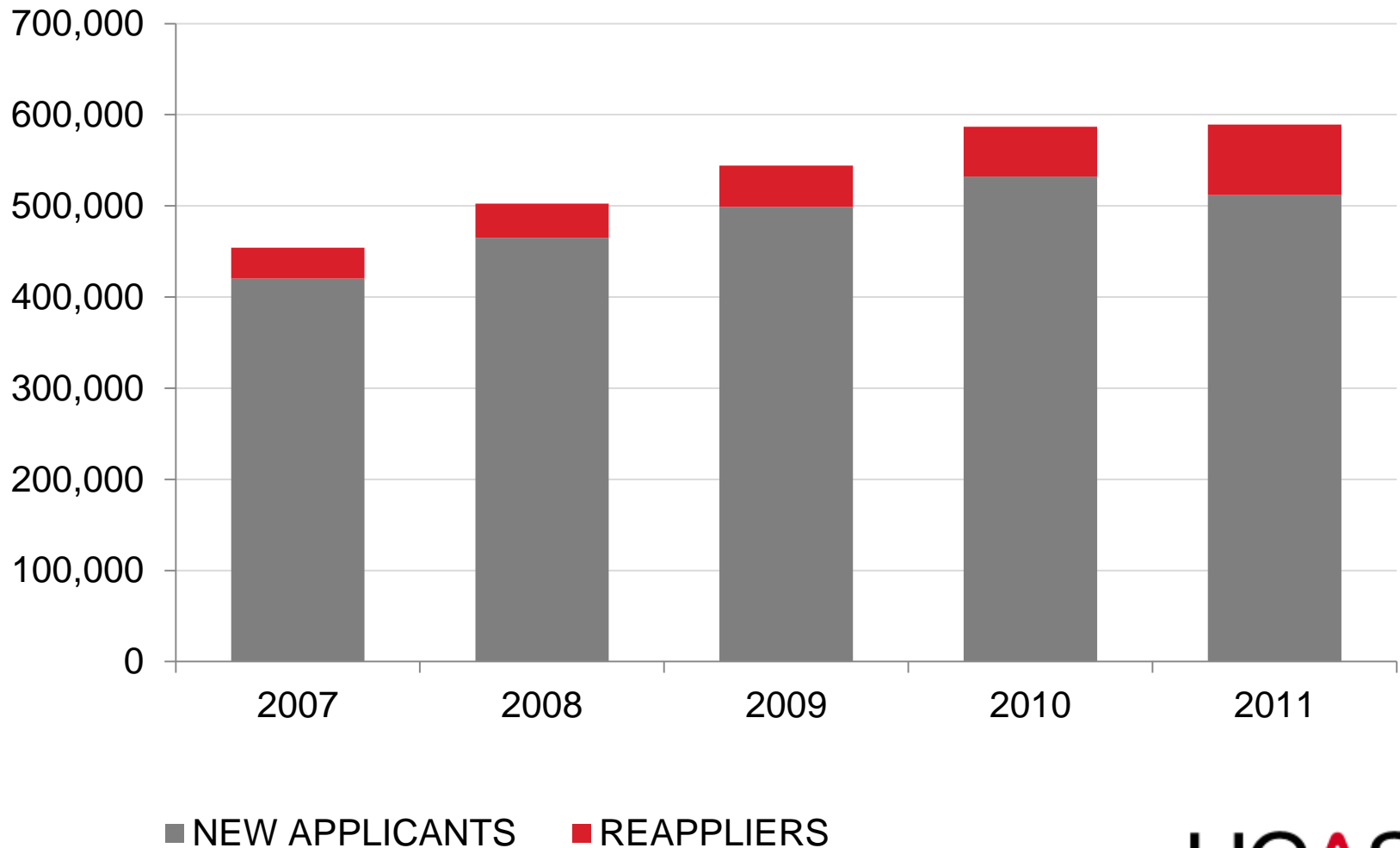
## > Post results applications

- c. 50,000 through clearing
  - Latent demand could be more like 100,000
- c. 70,000 re-appliers
- AAB+ policy
- c.100,000 19 year olds
- c.100,000 20-24 year olds

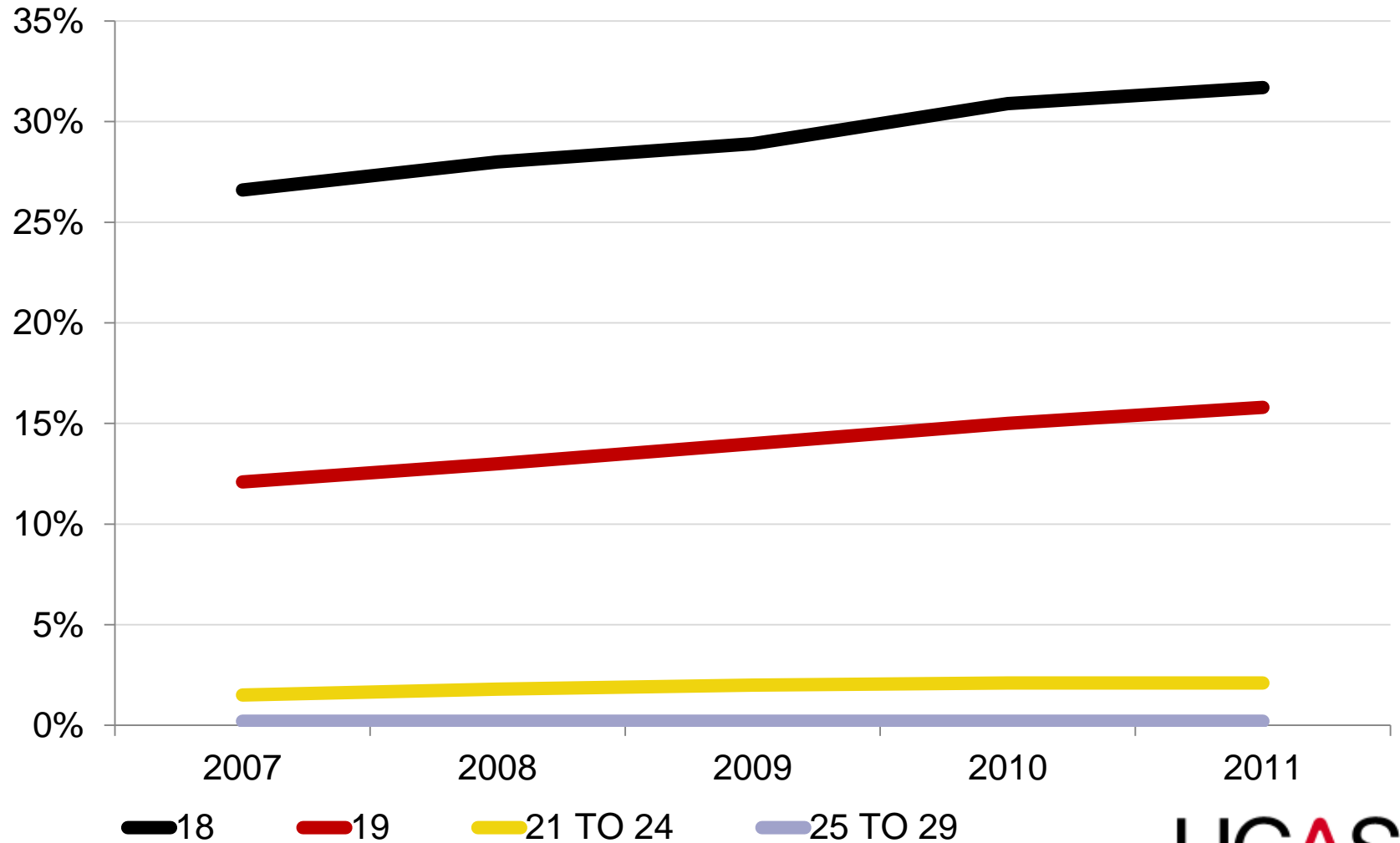
### UK domiciled Applicants



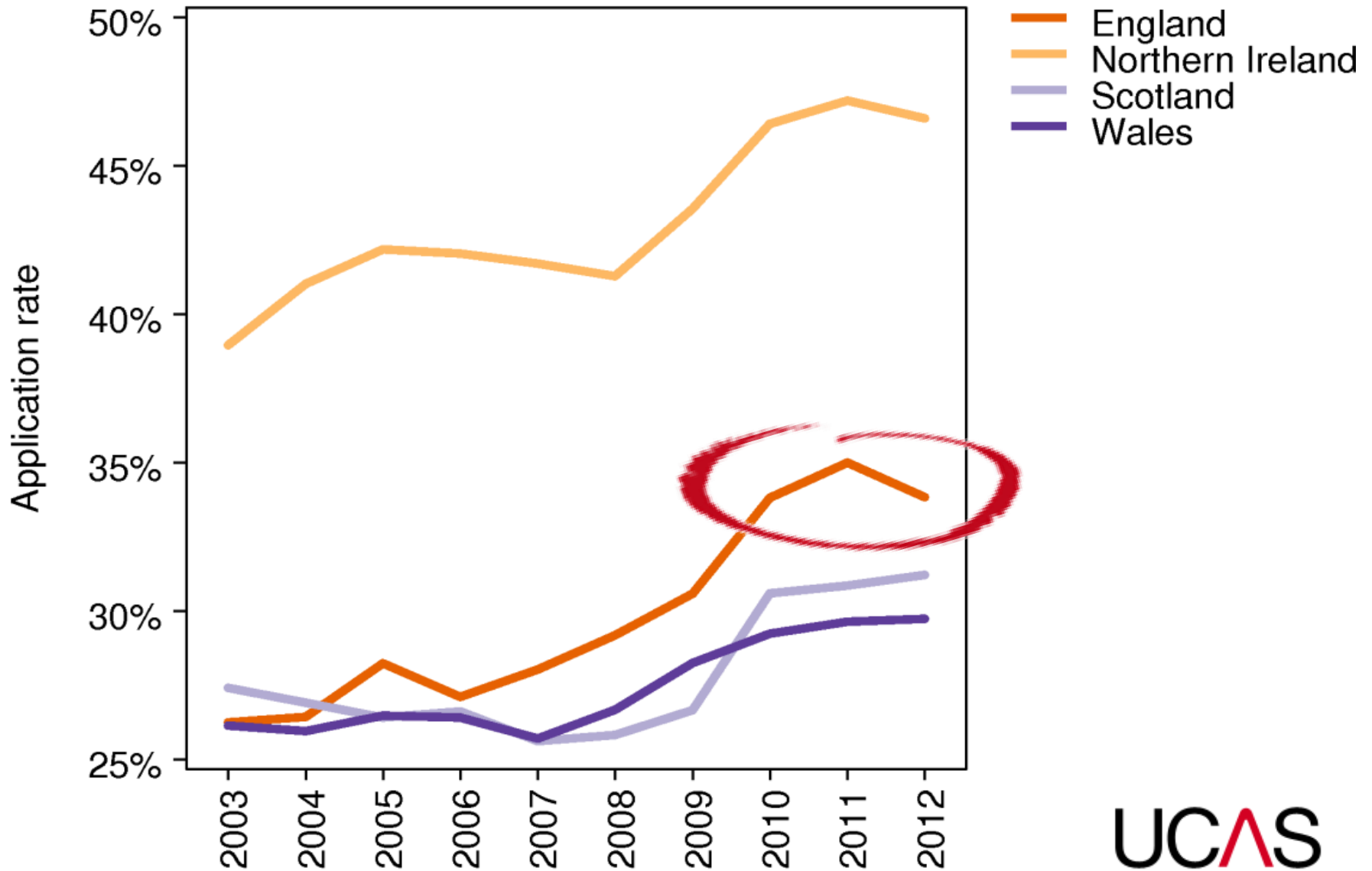
# UK applicants split by whether they are 'first time' or have made a previous application.



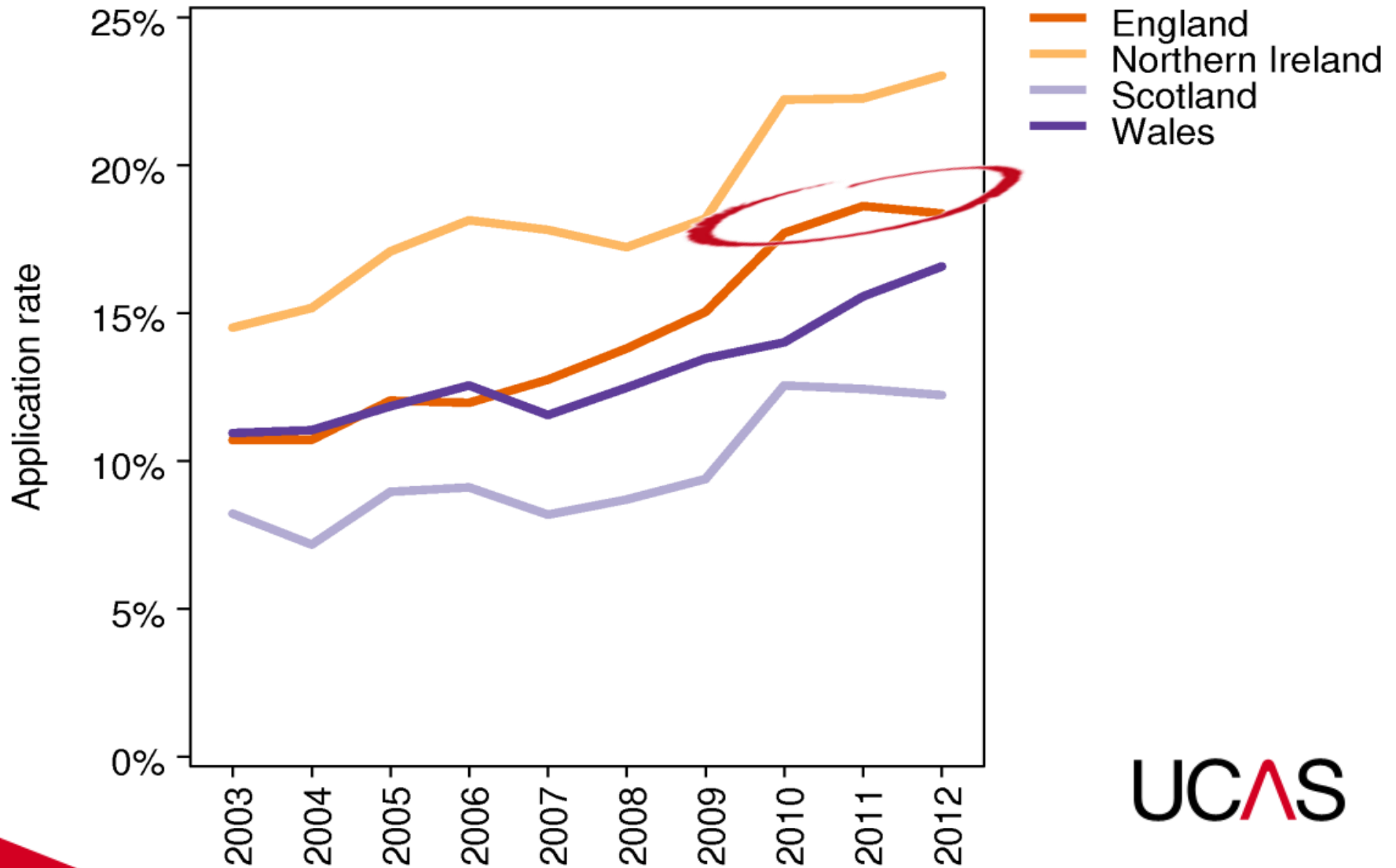
## > UK application rates by selected age group



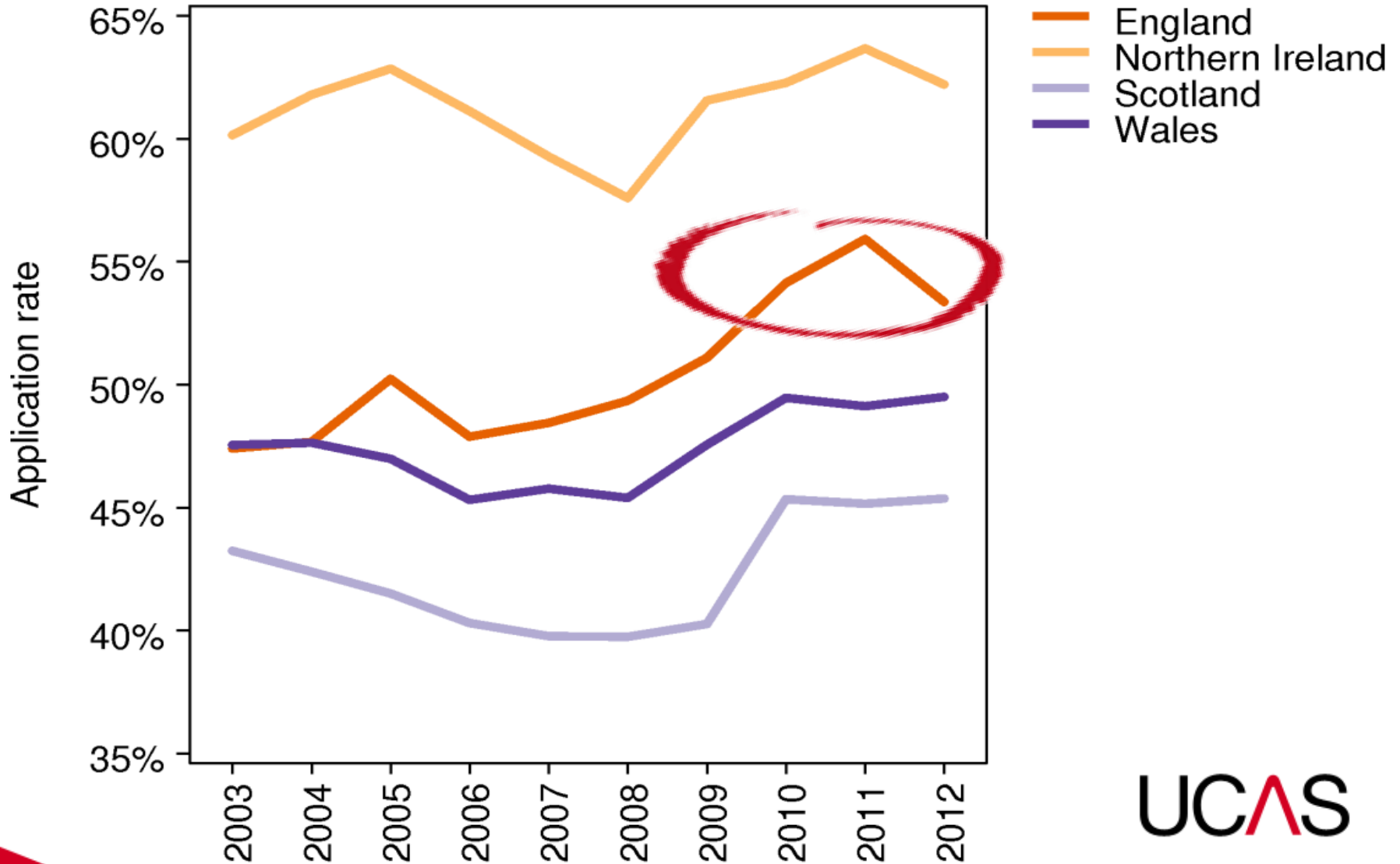
> Application rates for 18 year olds by country: Jan deadline



> Application rates for 18 year olds in most disadvantaged areas: Jan deadline









> Application rates for 18 year olds in most advantaged areas: Jan deadline





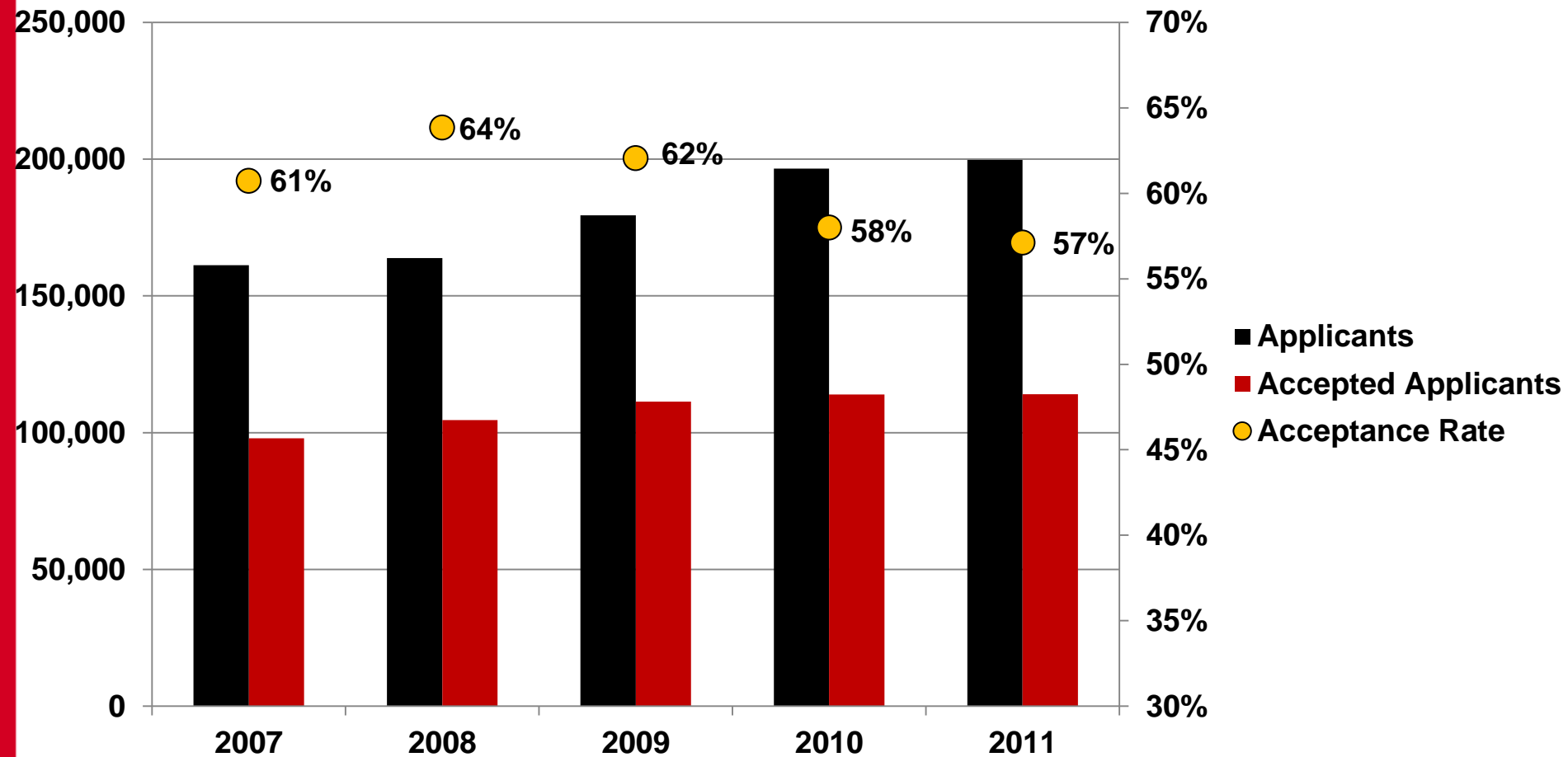
## > Position at 21 May 2012 - Applicants

>	2011	2012	% change	
<b>Total Applicants</b>	<b>647,008</b>	<b>597,473</b>	<b>-7.7%</b>	
UK 19 & under:	368,021	341,123	-7.3%	
<i>...as % of Total:</i>	<i>57%</i>	<i>57%</i>		
<b>STEM Applicants*</b>	<b>192,504</b>	<b>179,455</b>	<b>-6.8%</b>	
UK 19 & under:	114,781	110,939	-3.3%	
<i>...as % of STEM:</i>	<i>60%</i>	<i>62%</i>		

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\*Those with at least one choice to a STEM course

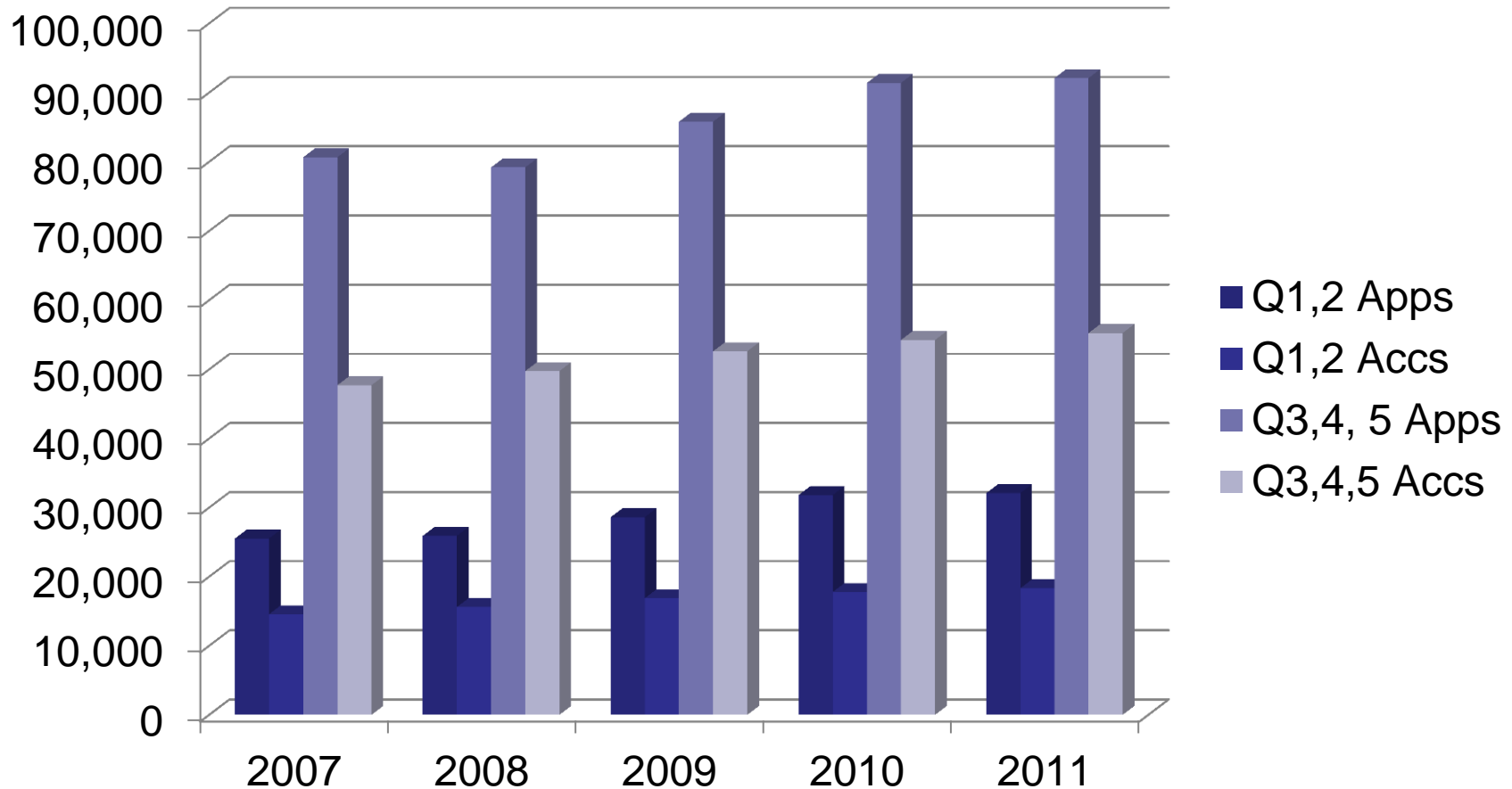
# > STEM Applicants and Accepted Applicants



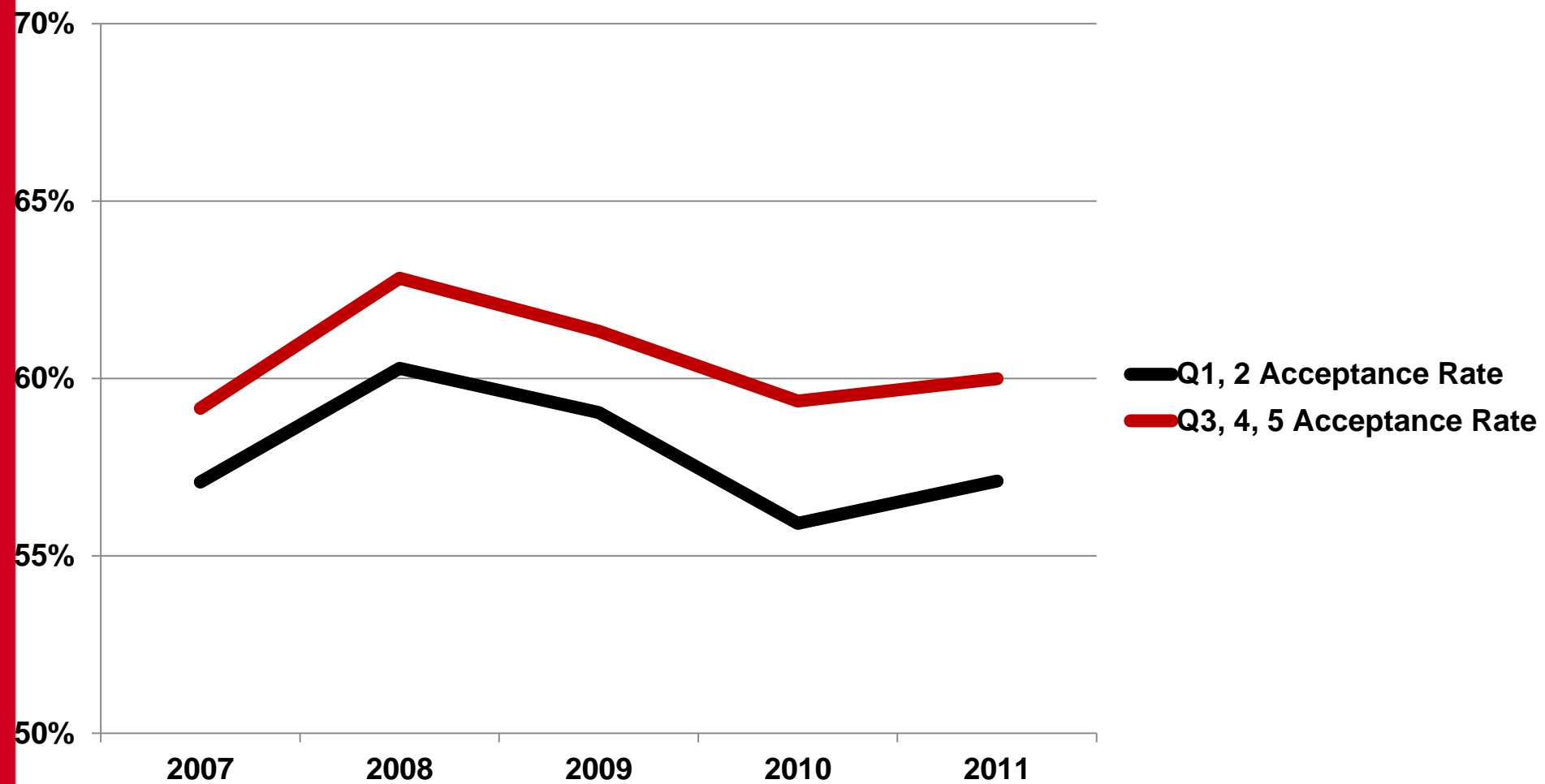
## > STEM applicants 2007-2011

	2007		2011		Change		
	Male	Female	Male	Female	Male	Female	Total
Apps	94949	64300	125357	74374	+29%	+16%	+25%
% total	60%	40%	63%	37%	+3 ppt	-3 ppt	
Acc rate	67%	50%	62%	49%	-5 ppt	-1 ppt	

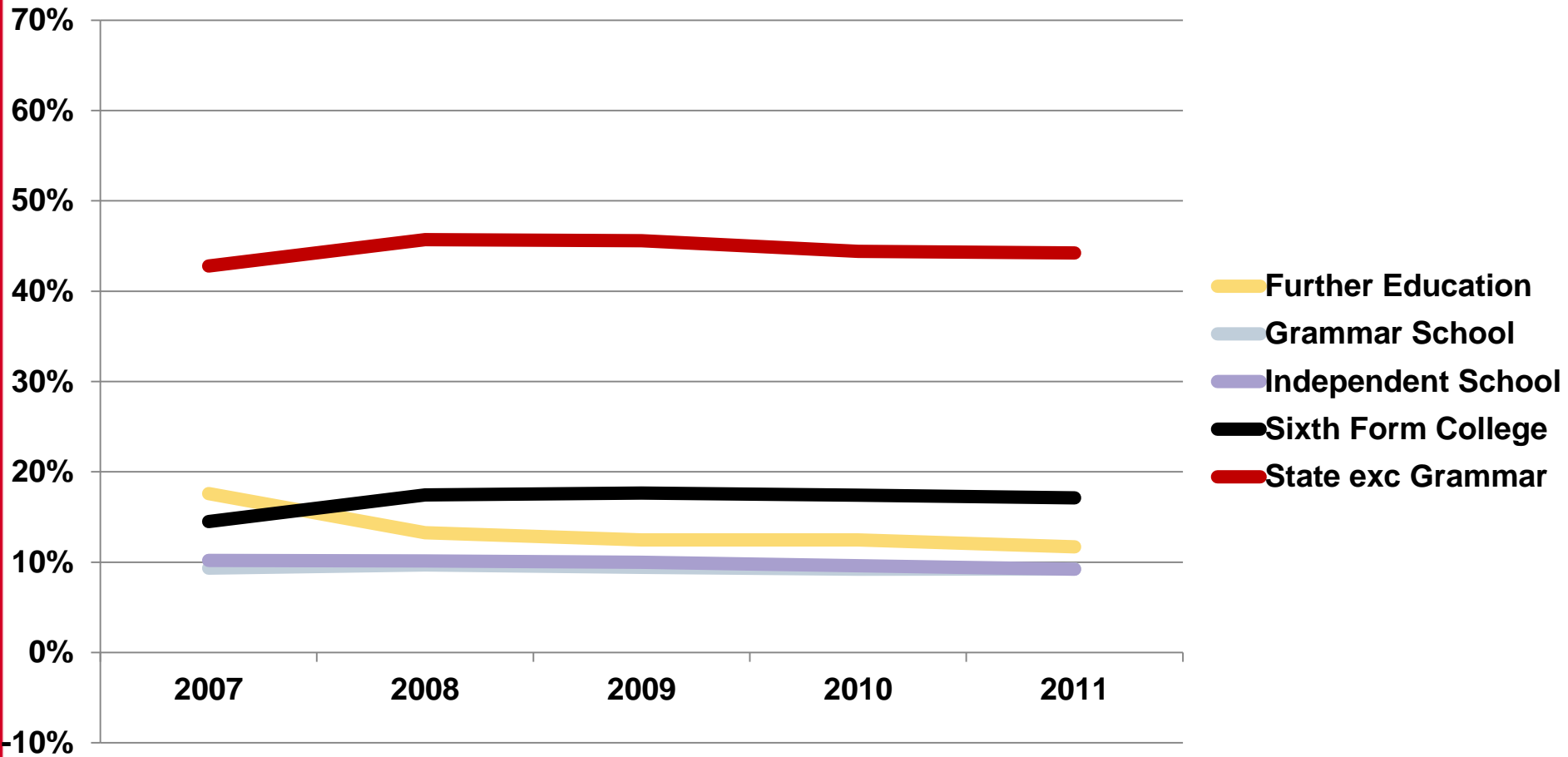
# > STEM Applicants and Accepted Applicants – POLAR2 quintiles



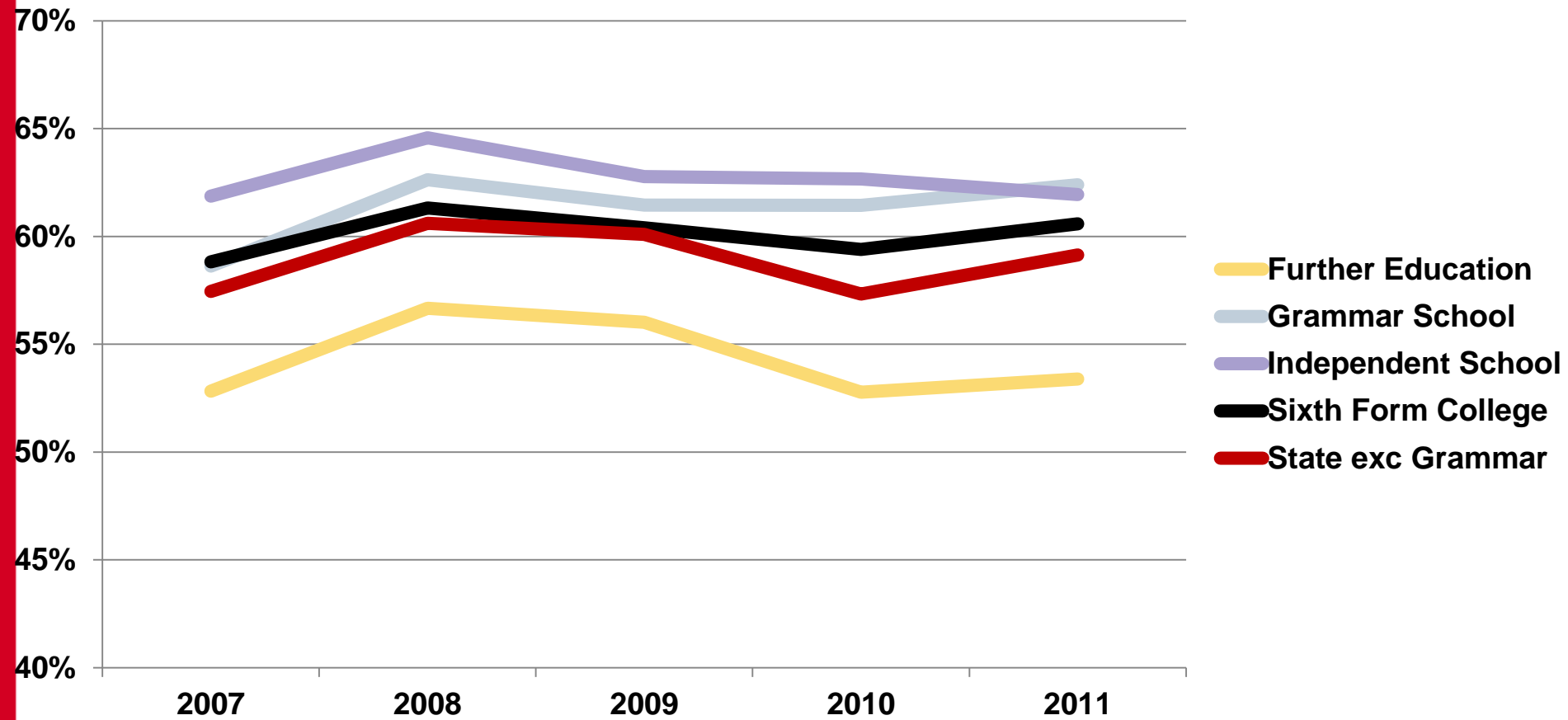
# > STEM Acceptance Rate – POLAR2



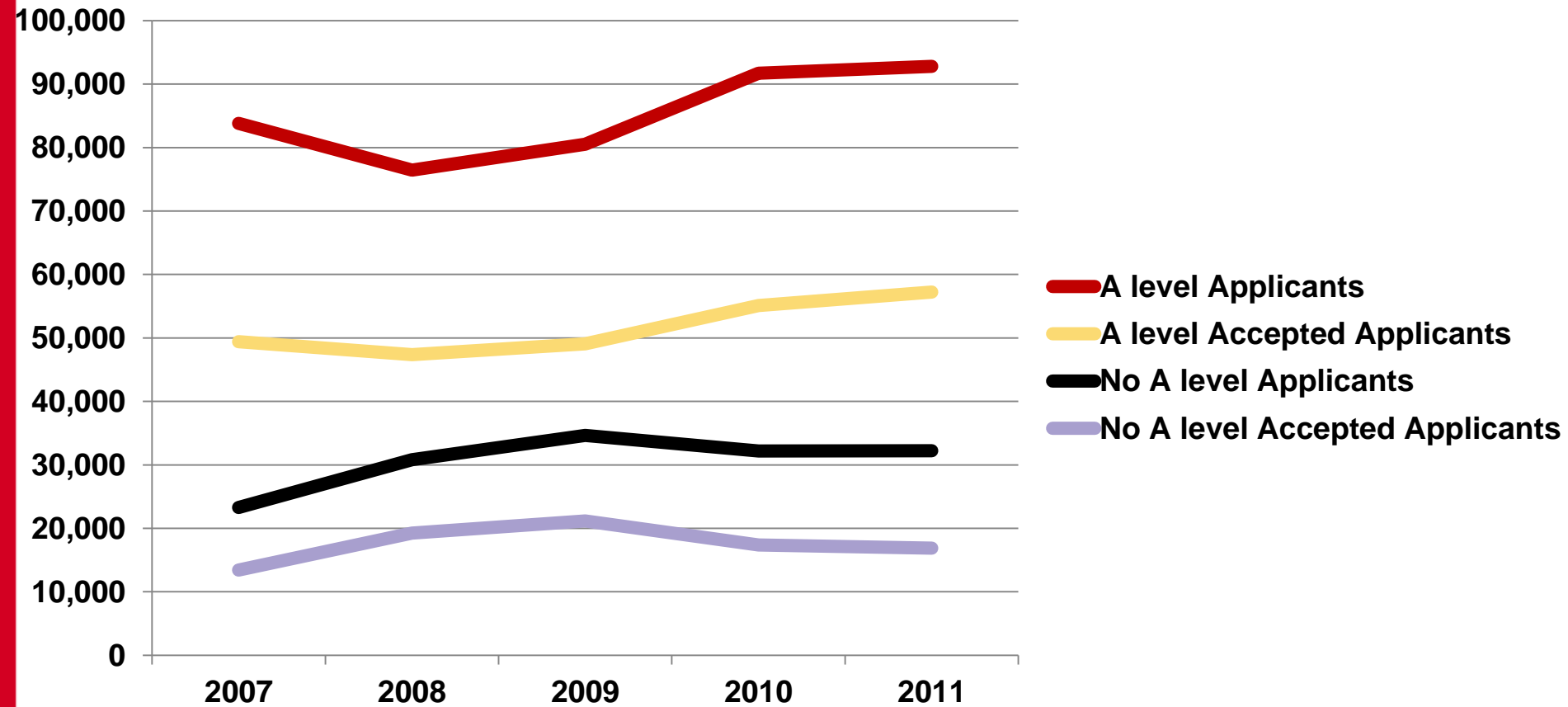
## > STEM Applicants – Centre Type



## > STEM Acceptance Rate – Centre Type

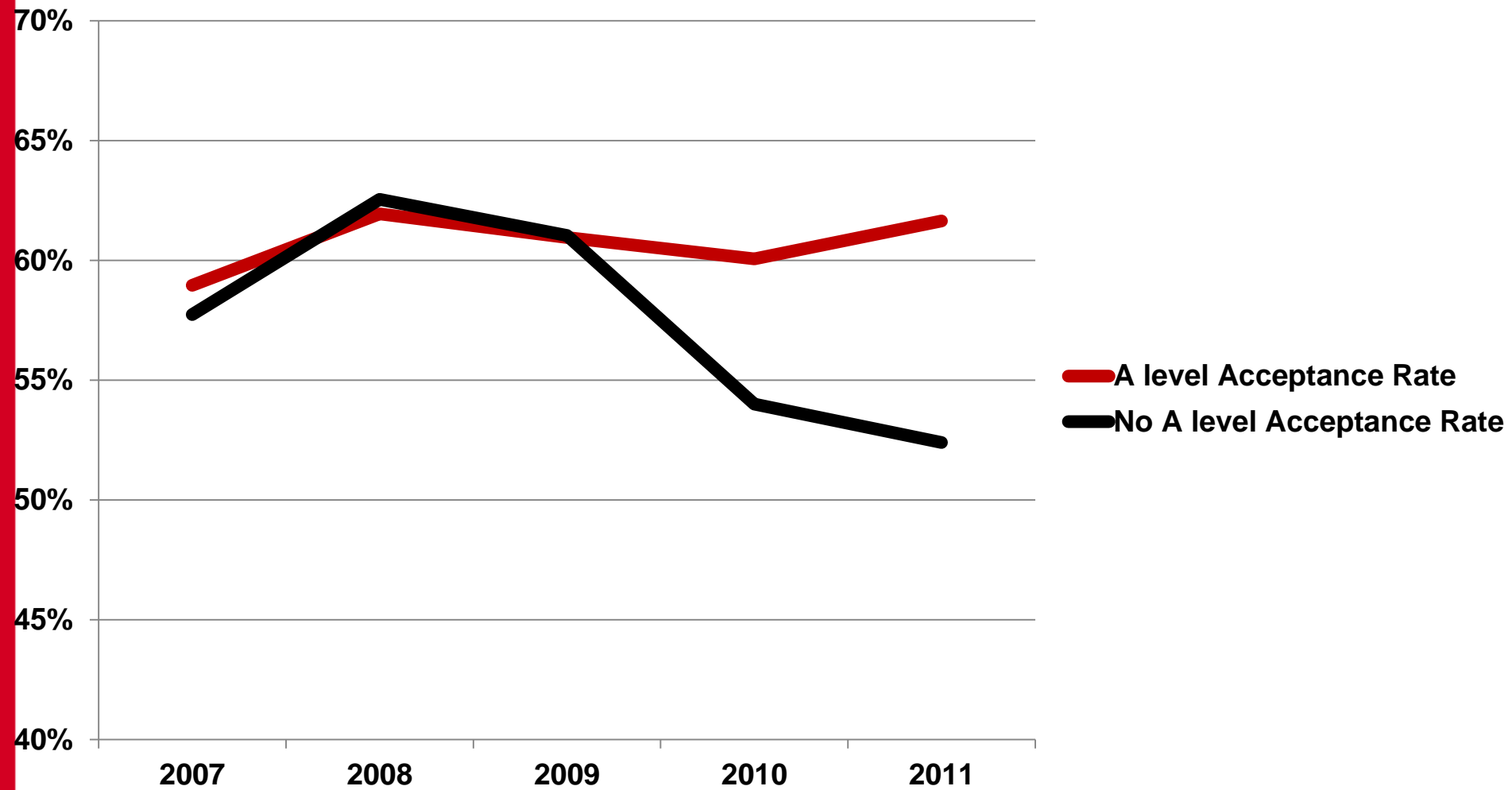


# STEM Applicants and Accepted Applicants – Qualification Type

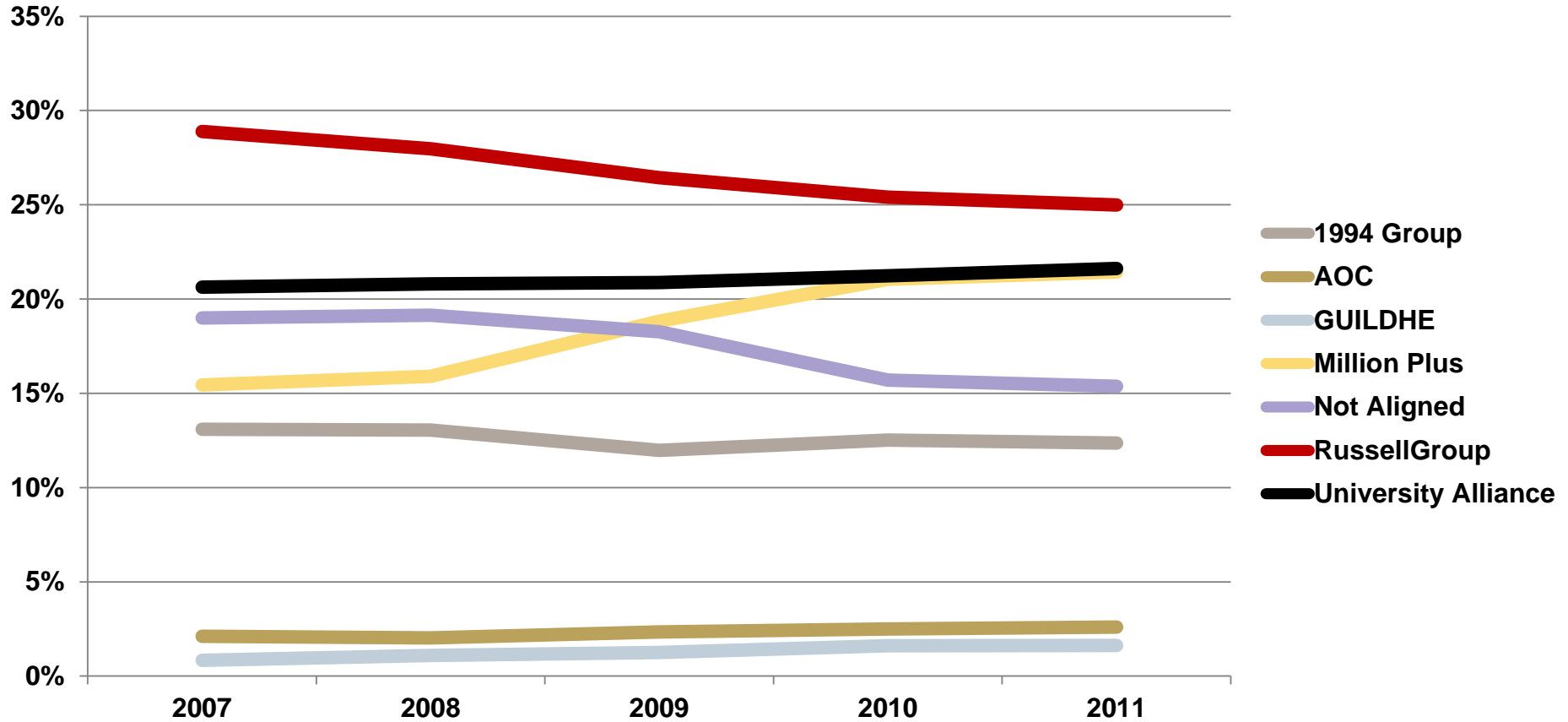




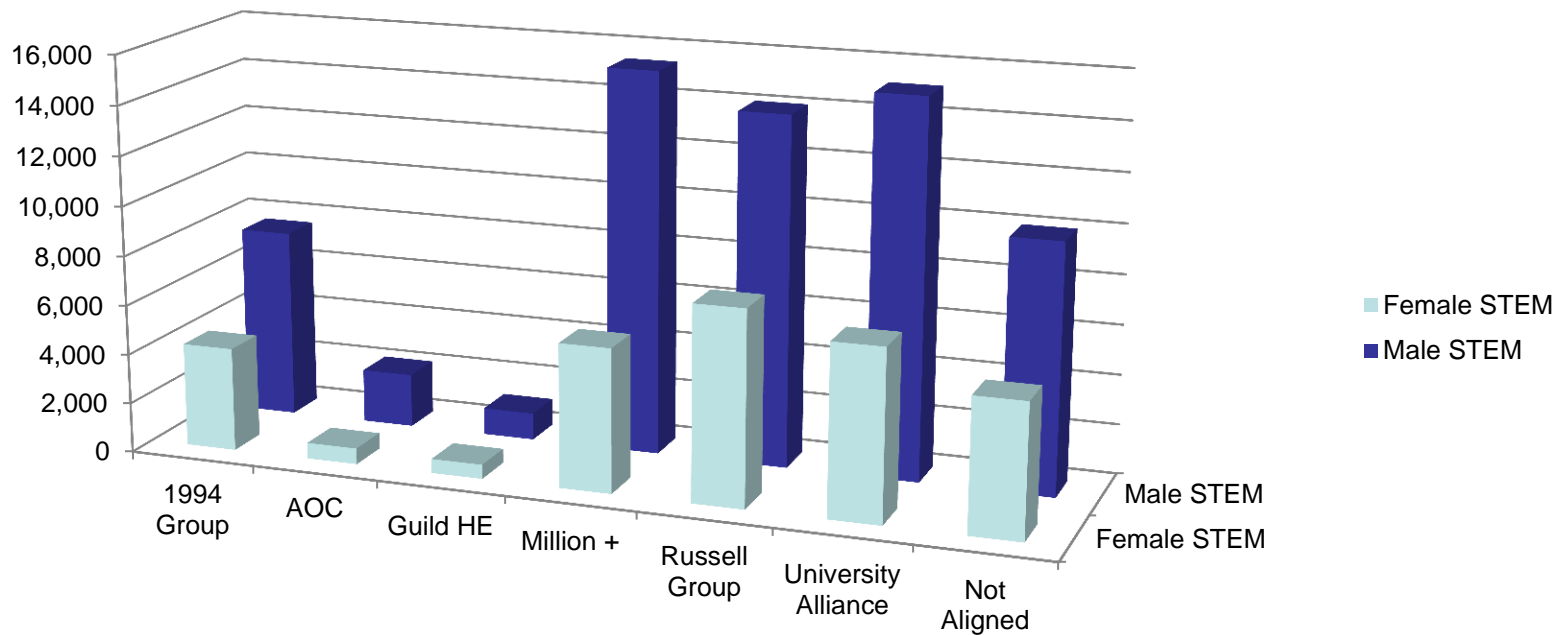
## > STEM Acceptance Rate – Qualification Type



# > STEM Accepted Applicants – Institution Groups



# > UK domiciled 17 -19 STEM\* accepts 2010

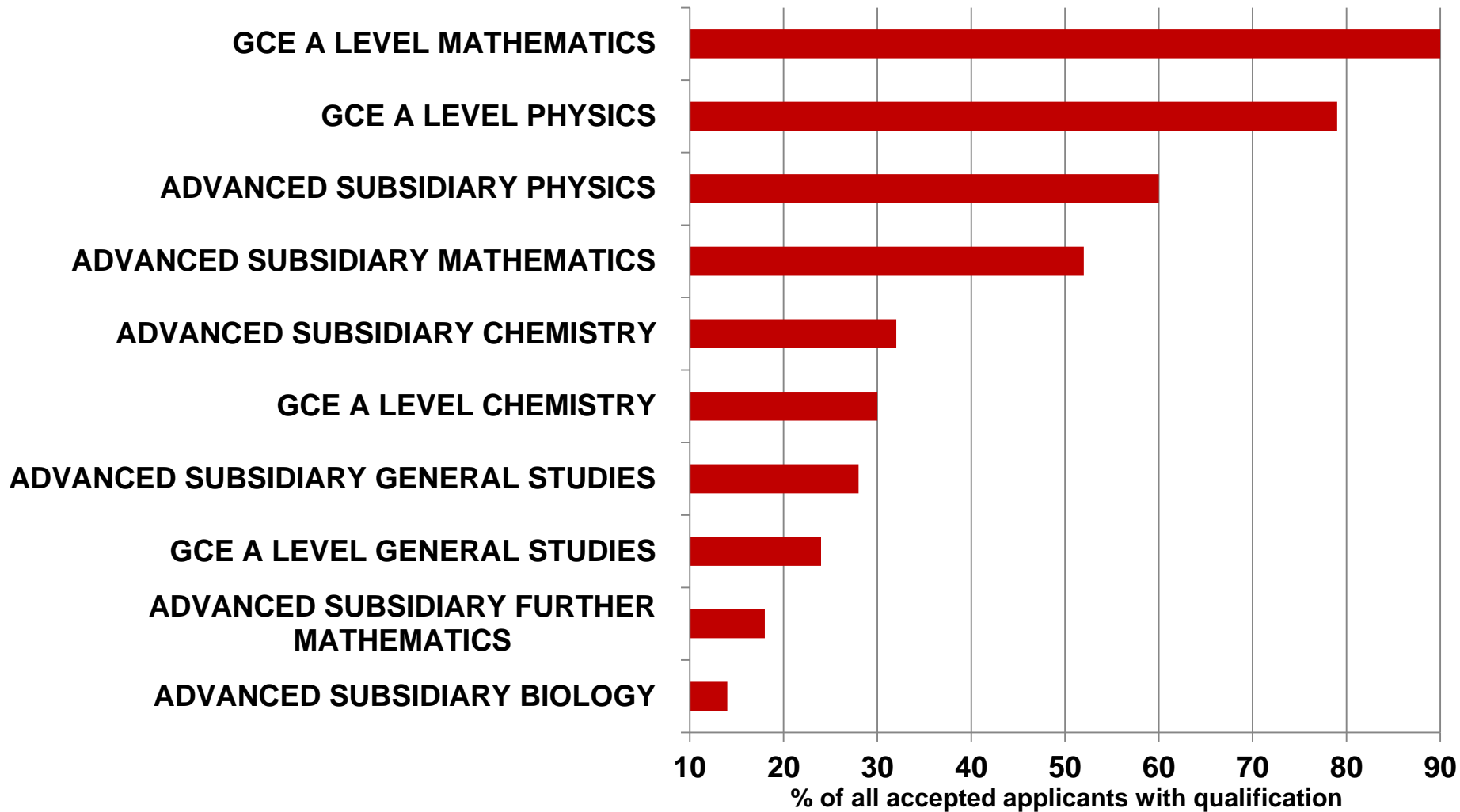


*\*Excludes clinical and practice based STEM*

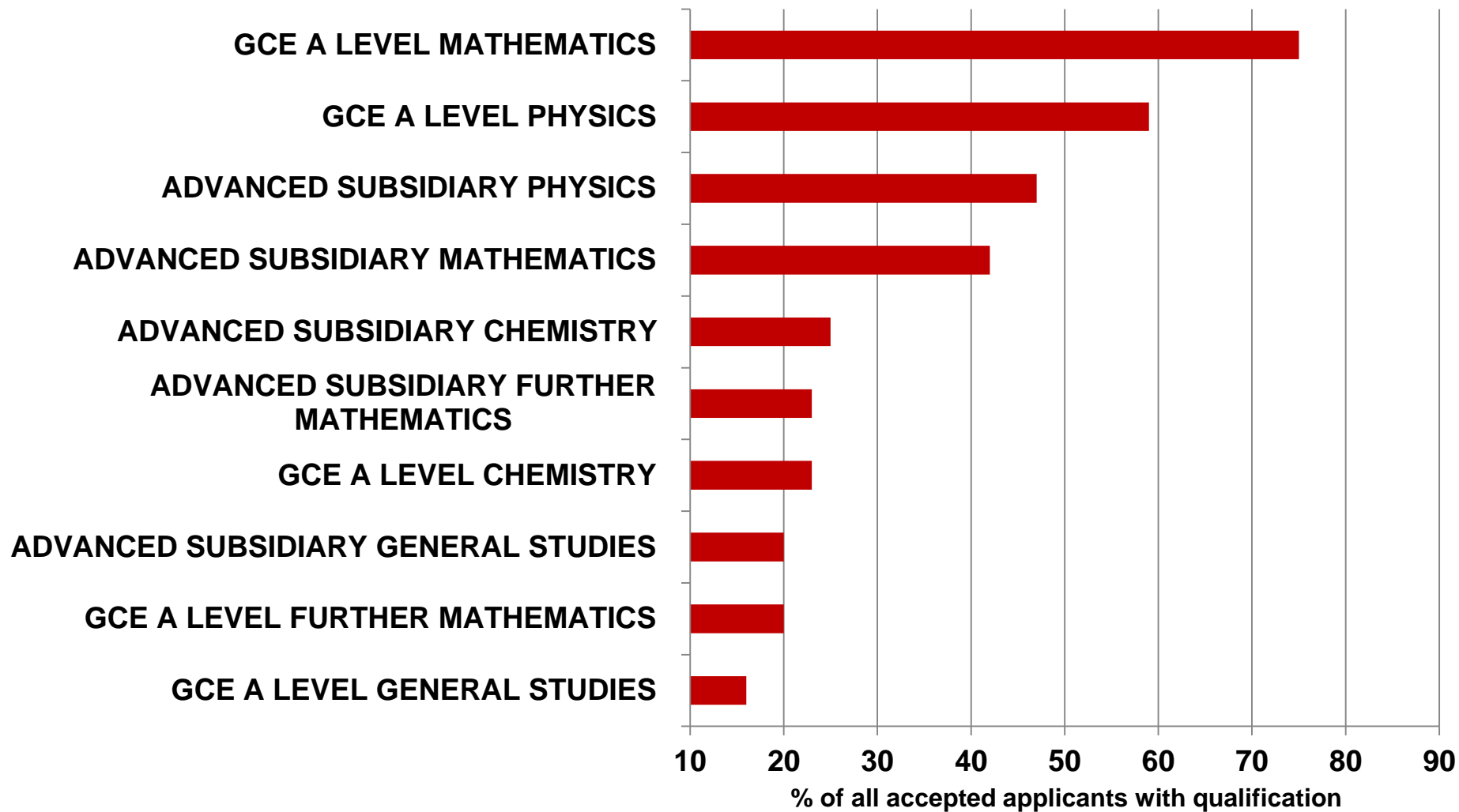
## > UCAS Selected Qualifications Held (SQH) Data

- Based on UK domiciled accepted applicants 2007-2010
- Institution-subject groupings are defined as combinations of institution and subject line
- Population linked to verified qualifications results received through Awarding Body Linkage and directly for BTEC awards
- “Qualifications held” are defined as combinations of recorded qualification type and qualification subject
- To prevent disclosure of information about individuals some restrictions are applied to the SQH data
- The statistic is the proportion of accepted applicants that held the specified qualification type and qualification subject combination.

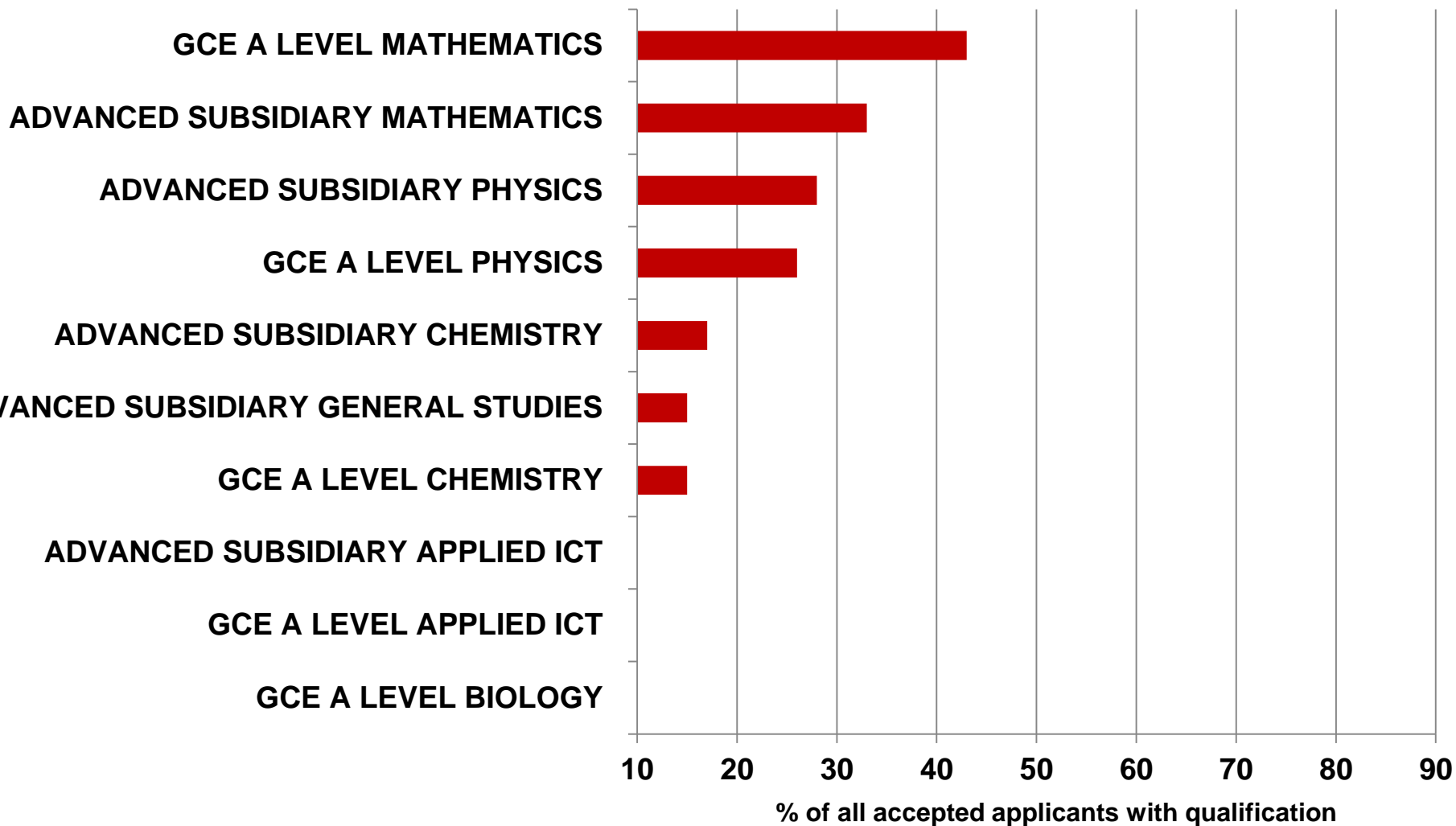
# Mechanical Engineering – Russell Group Institution



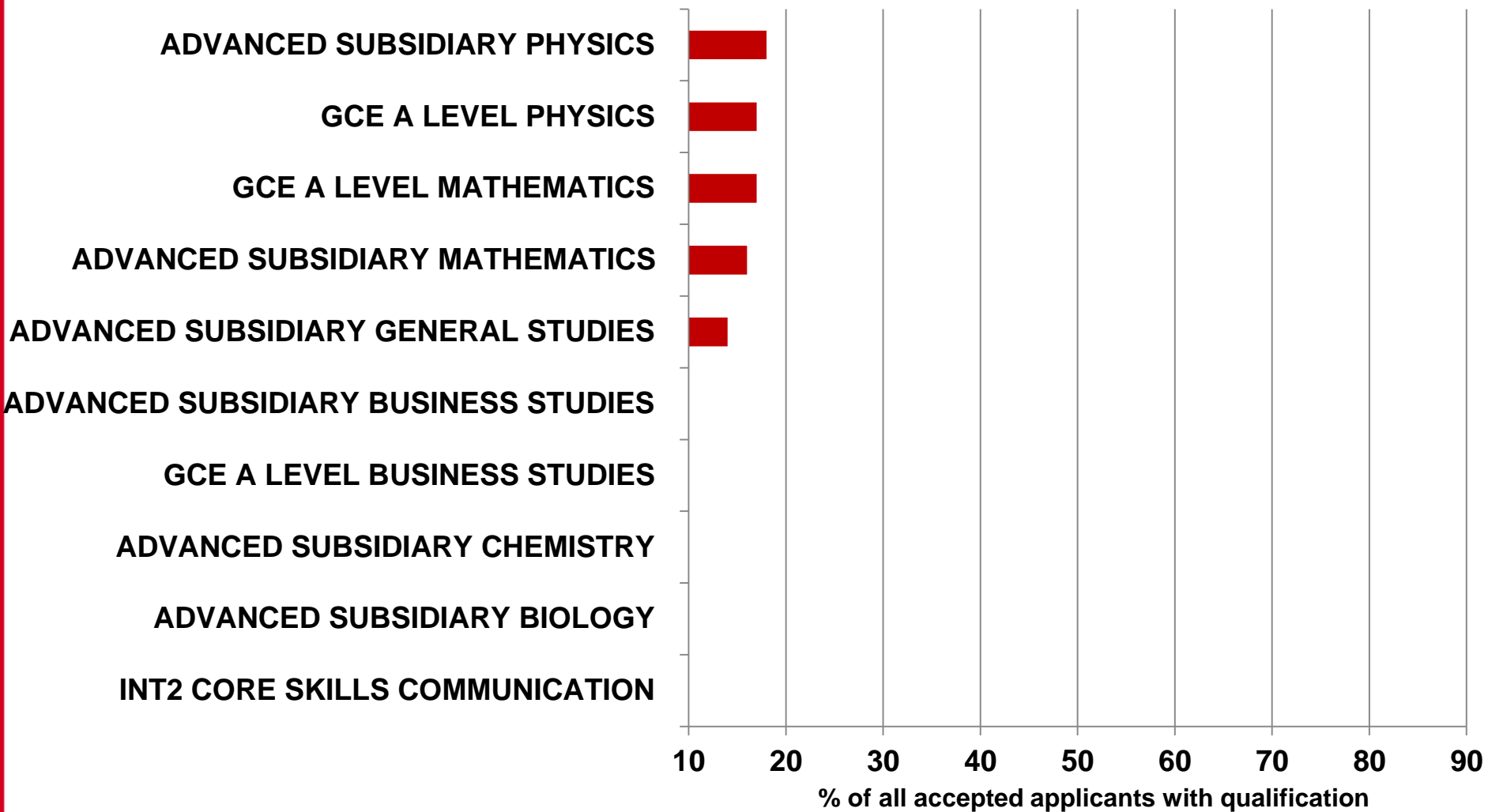
# Mechanical Engineering – 1994 Group Institution



# Mechanical Engineering – University Alliance Institution



# > Mechanical Engineering – Million Plus Institution





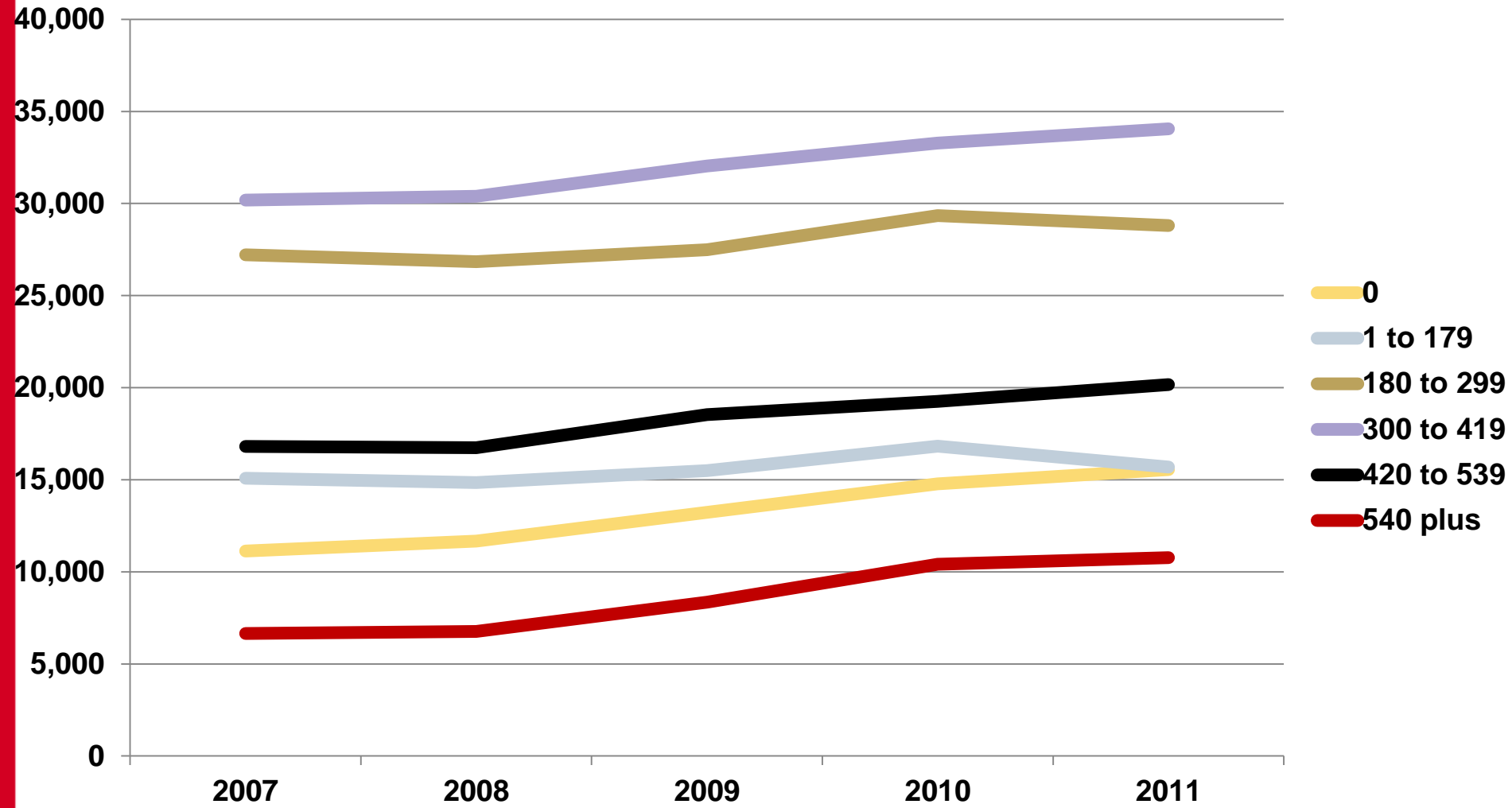
# > STEM Accepted Applicants – A Level Combinations - 1

Accepted Subject Group	% Accepted Applicants	
	Maths, Further Maths, Physics	Maths, Physics, Chemistry
Group G Mathematical & Comp Sci	34.8	11.8
Group H Engineering	26.4	29.3
Group F Physical Sciences	20.0	29.0
Z General, other combined & unknown	5.1	6.0
Y Combined sciences	3.2	2.9
Group L Social Studies	3.0	1.0
Y Sciences combined with social sciences or arts	1.5	0.7
Group A Medicine & Dentistry	1.3	8.2
Group N Business & Admin studies	1.1	0.9
Group K Architecture, Build & Plan	0.7	0.5
Group B Subjects allied to Medicine	0.5	4.6
Group C Biological Sciences	0.5	2.3
Group J Technologies	0.4	0.6

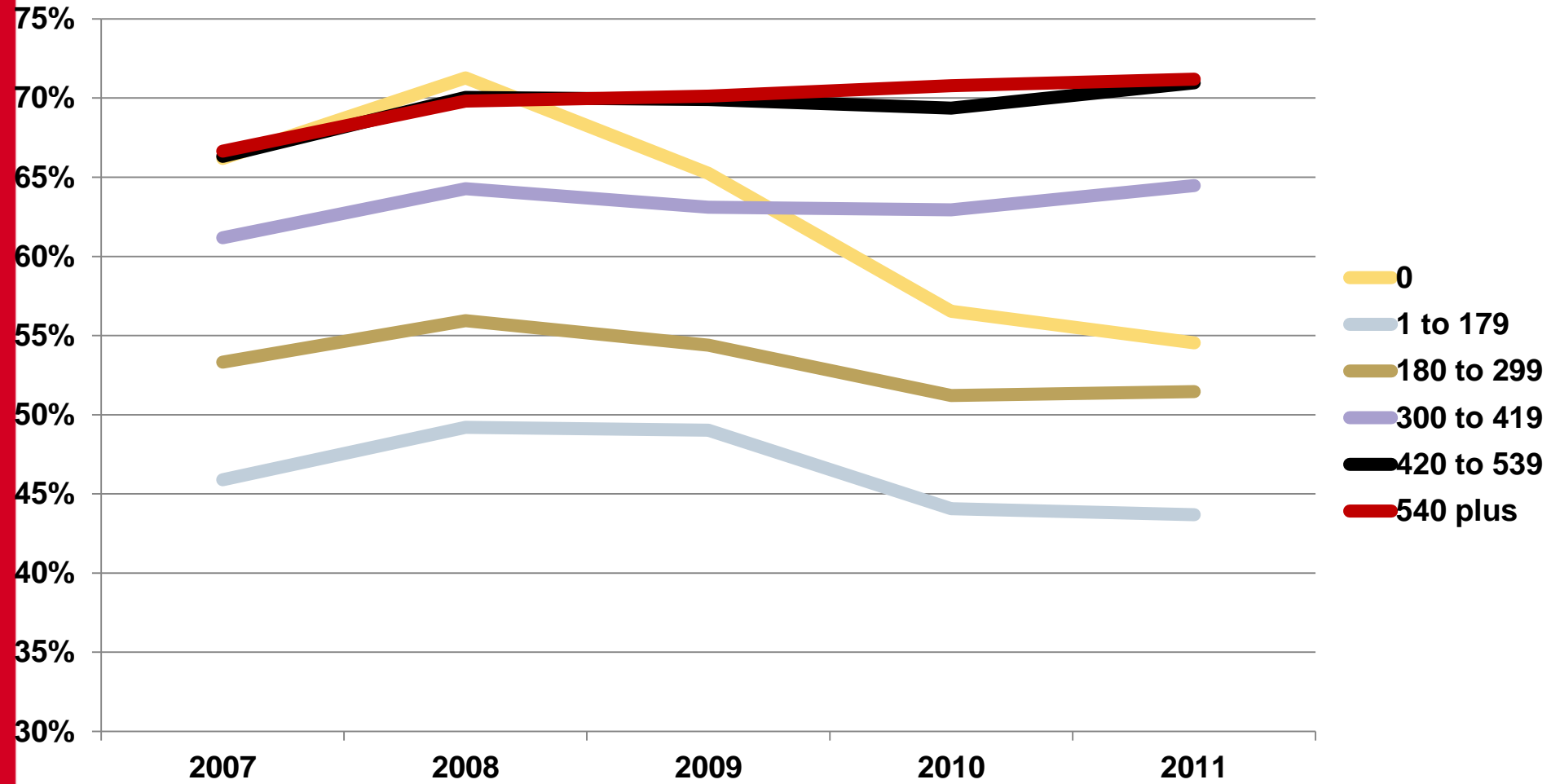
# STEM Accepted Applicants – A Level Combinations - 2

A Level Subjects	Accepted Subject Group	% Accepted Applicants
<b>Maths with Physics</b>	<b>Group H Engineering</b>	<b>33.0%</b>
	<b>Group F Physical Sciences</b>	<b>20.2%</b>
	<b>Group G Mathematical &amp; Comp Sci</b>	<b>17.2%</b>
	<b>Group L Social Studies</b>	<b>3.5%</b>
	<b>Group A Medicine &amp; Dentistry</b>	<b>3.3%</b>
<b>Maths without Physics</b>	<b>Group N Business &amp; Admin studies</b>	<b>11.7%</b>
	<b>Group G Mathematical &amp; Comp Sci</b>	<b>11.5%</b>
	<b>Group C Biological Sciences</b>	<b>10.7%</b>
	<b>Group B Subjects allied to Medicine</b>	<b>9.8%</b>
	<b>Group L Social Studies</b>	<b>9.4%</b>
<b>Physics without Maths</b>	<b>Group F Physical Sciences</b>	<b>15.1%</b>
	<b>Group C Biological Sciences</b>	<b>14.5%</b>
	<b>Group B Subjects allied to Medicine</b>	<b>10.4%</b>
	<b>Group H Engineering</b>	<b>8.2%</b>
	<b>Group A Medicine &amp; Dentistry</b>	<b>6.5%</b>

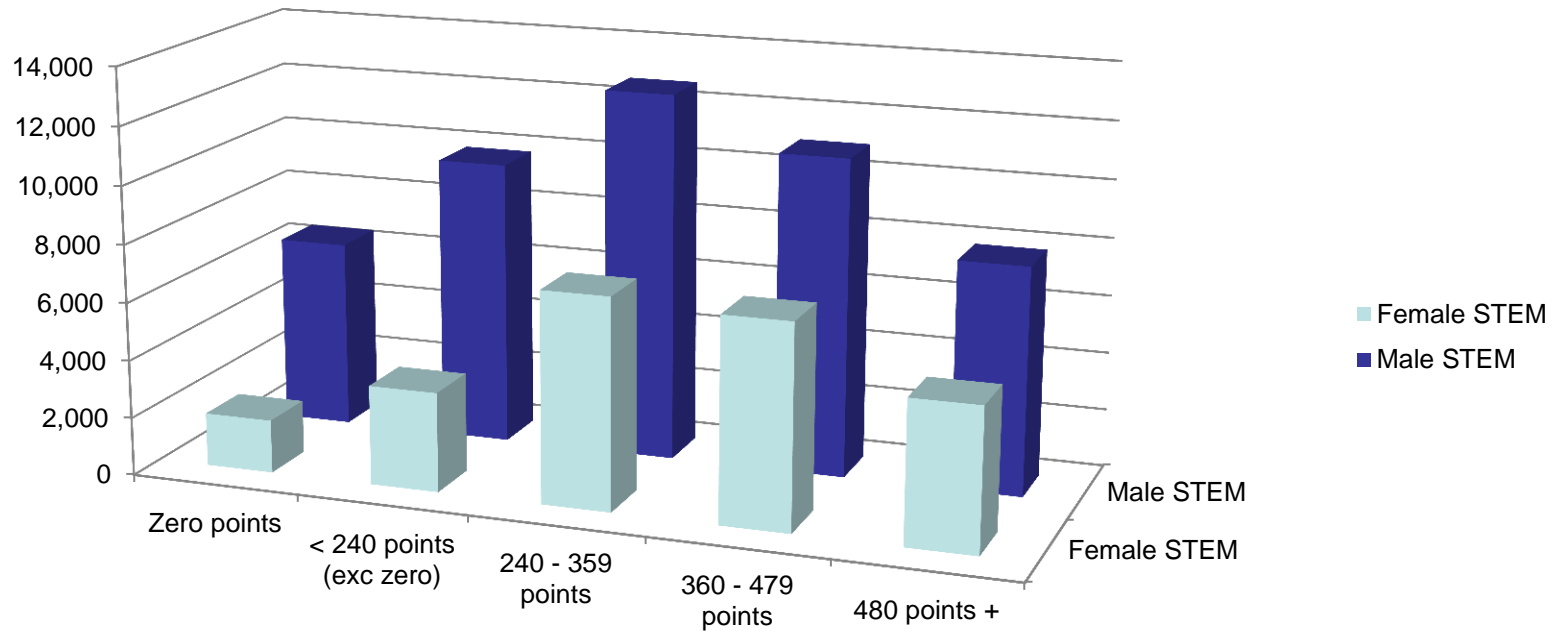
# > STEM Applicants – Tariff



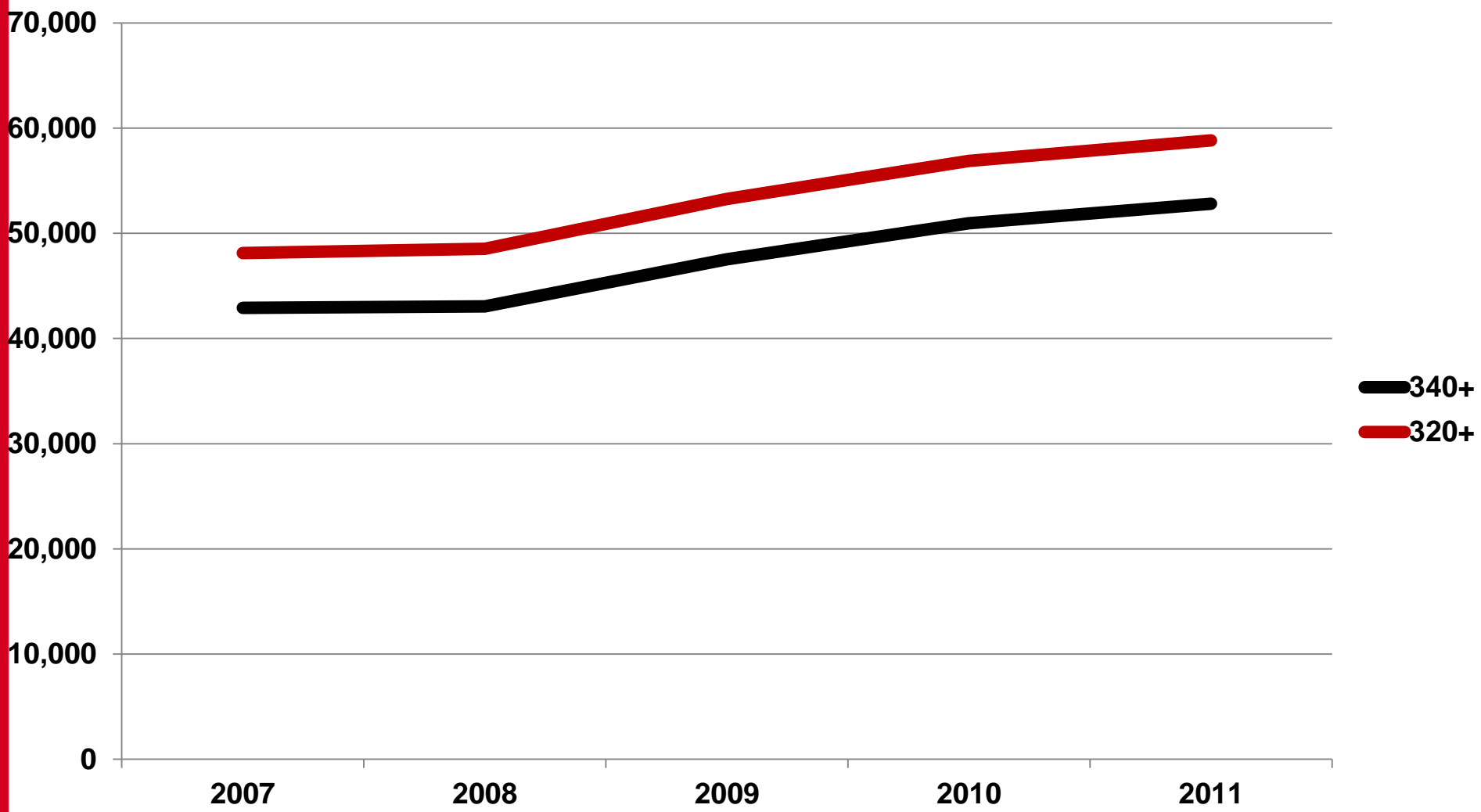
# > STEM Acceptance Rate – Tariff



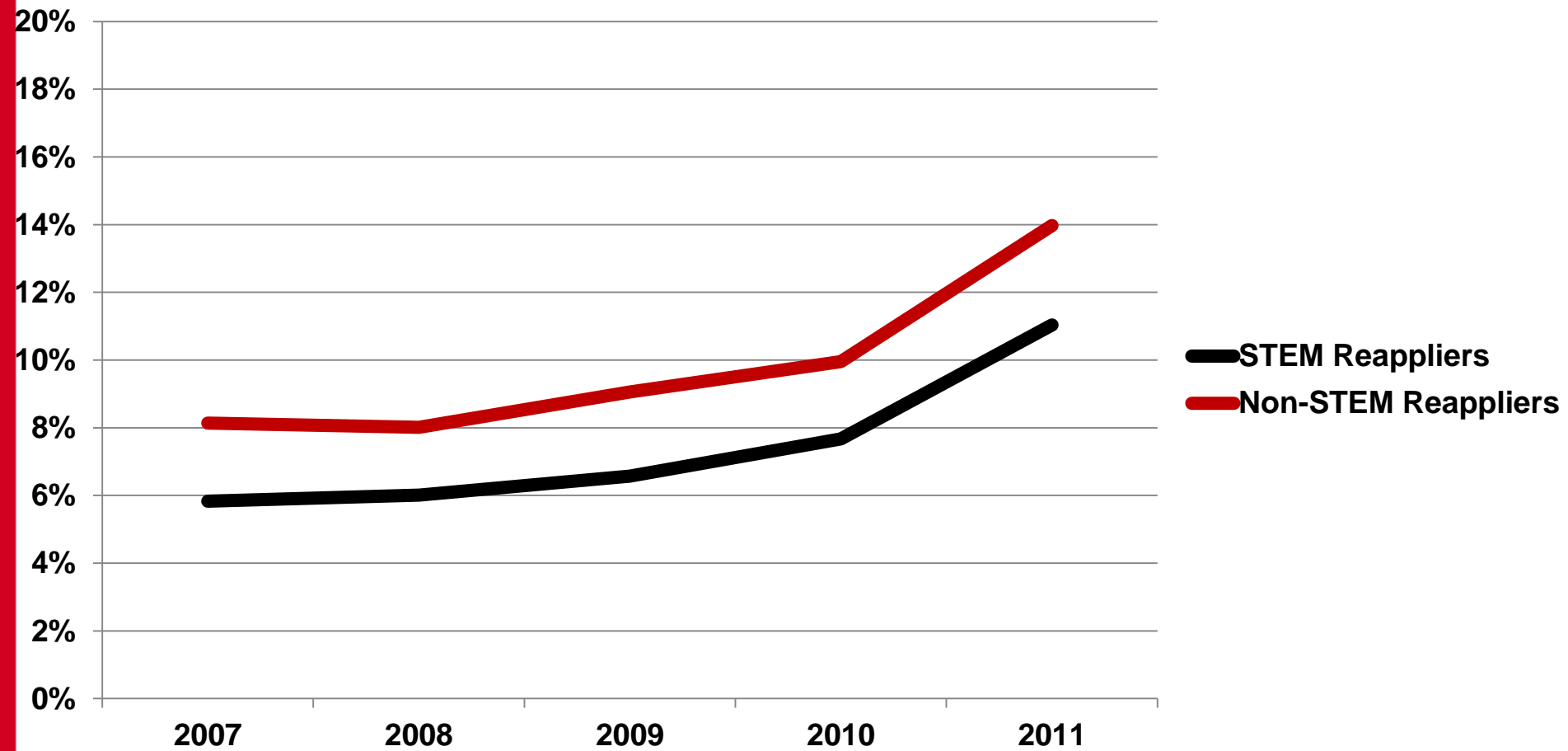
# > UK domiciled 17-19 accepts by tariff



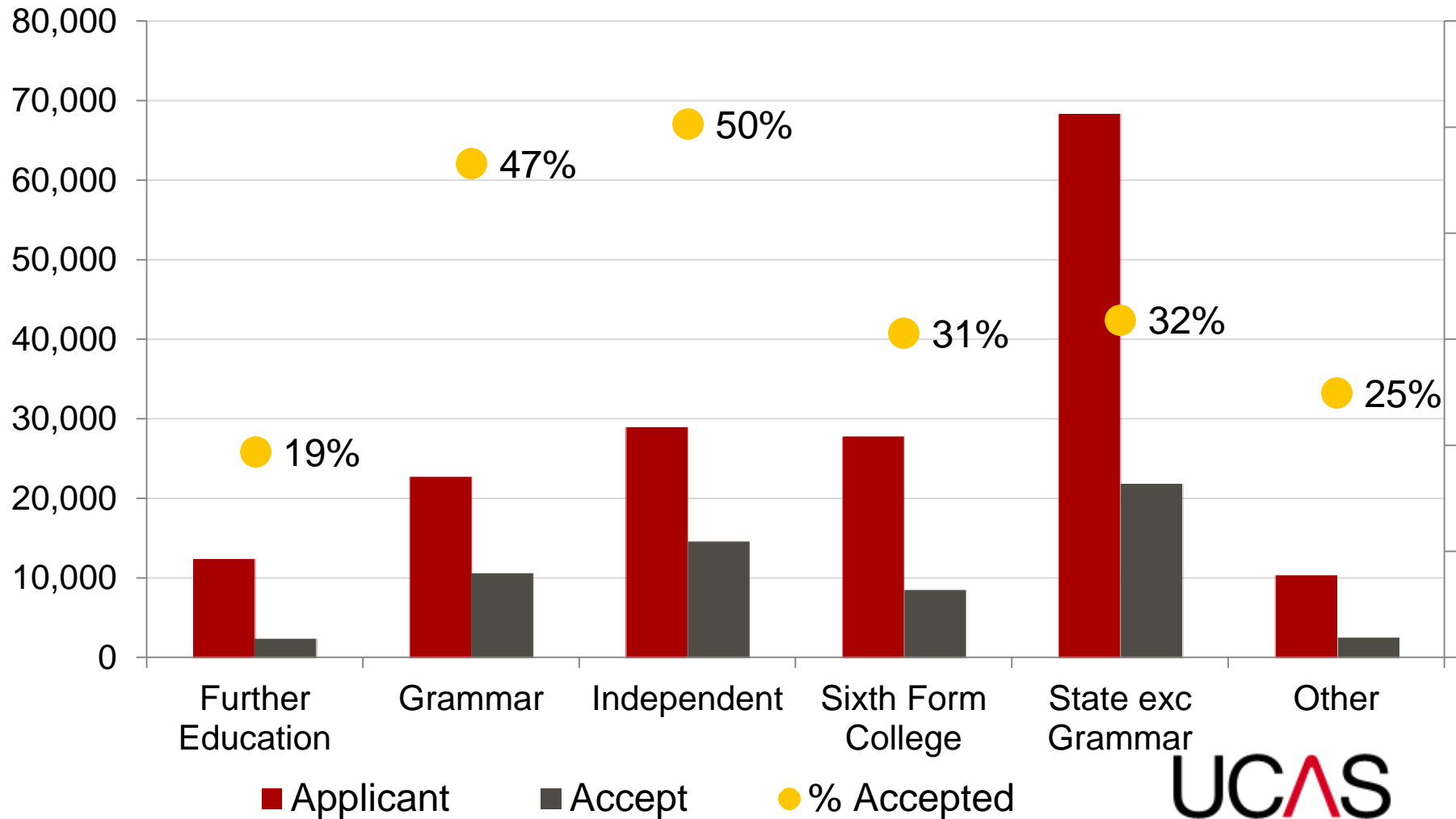
# > STEM Applicants – Tariff Thresholds



## > Reappliers



> 2011 end of cycle - previous education  
UK-domiciled aged 17-19 applicants, accepts and  
acceptance rate to Russell Group institutions.



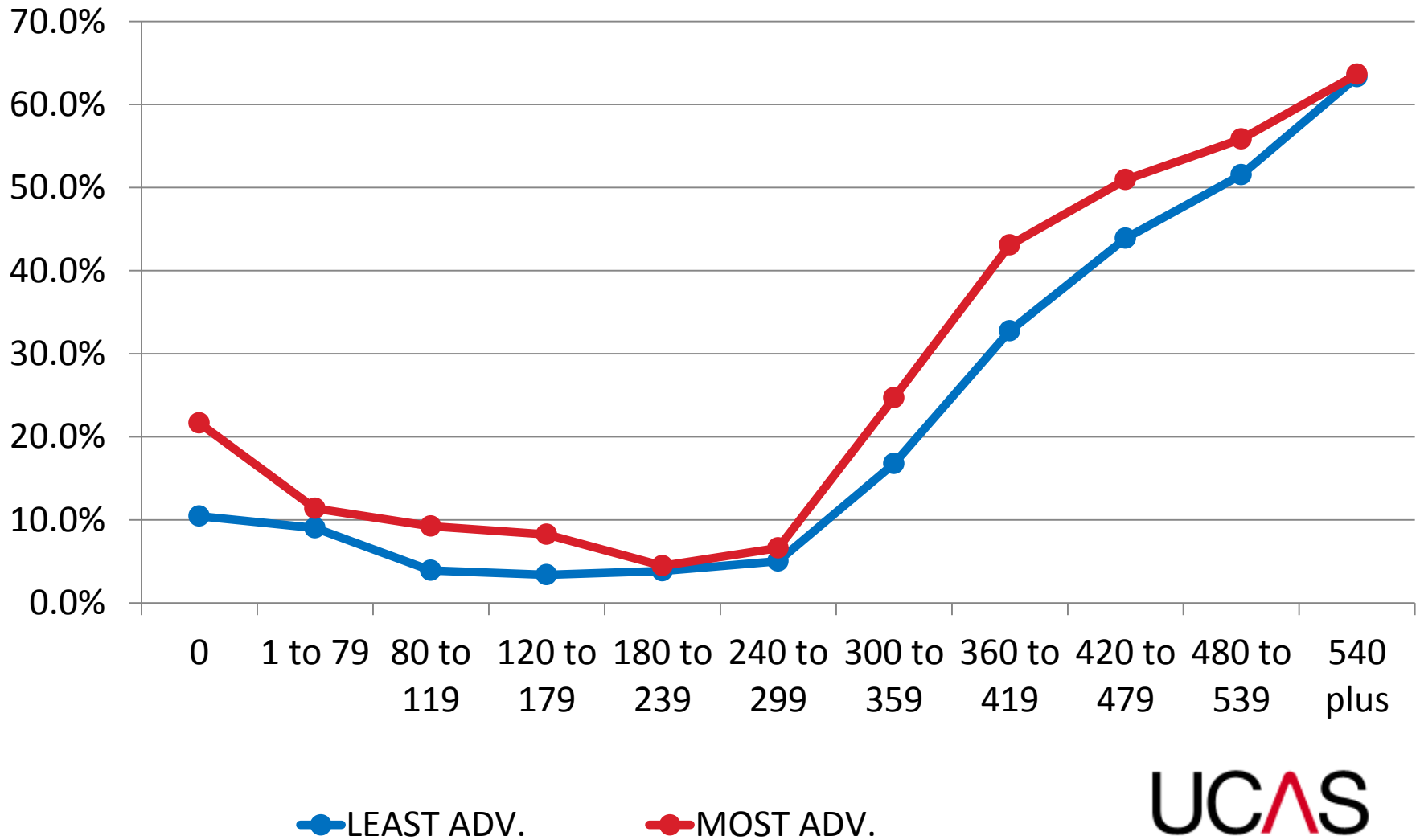


## > Acceptance rates to Russell Group Institutions

	2008	2011
Least Advantaged	30%	24%
Most Advantaged	46%	41%



> 2011 end of cycle - POLAR 2 & Tariff profile  
UK-domiciled aged 17-19 acceptance rates to Russell Group



## > Eligibility.....

- From a household with an annual income of £25,000 or below OR in receipt of full EMA during their year 12 or year 13 studies (full EMA is currently £20, prior to 2011 full EMA was £30) OR in receipt of free school meals during their GCSE studies
- In the first generation of their immediate family to apply to higher education
- Attends, or have attended, a school which achieved less than the national average of 5 A\* to C passes (including English & Maths) at GCSE
- Only option is to attend a local university
- Studies disrupted by circumstances in their personal, social or domestic lives
- Live in a geographical area with low levels of progression onto higher education
- Living or grew up in public care

> The Moral Maze.....



*“I’m very glad that nobody took account of my accent, my social background, or investigated my parents’ lack of education to do me a favour – because I would never have been taken seriously. I’m all for storming the Ivory Towers but I’m not for destroying them.....”*

*Claire Fox, The Institute of Ideas*

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## > Questions



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